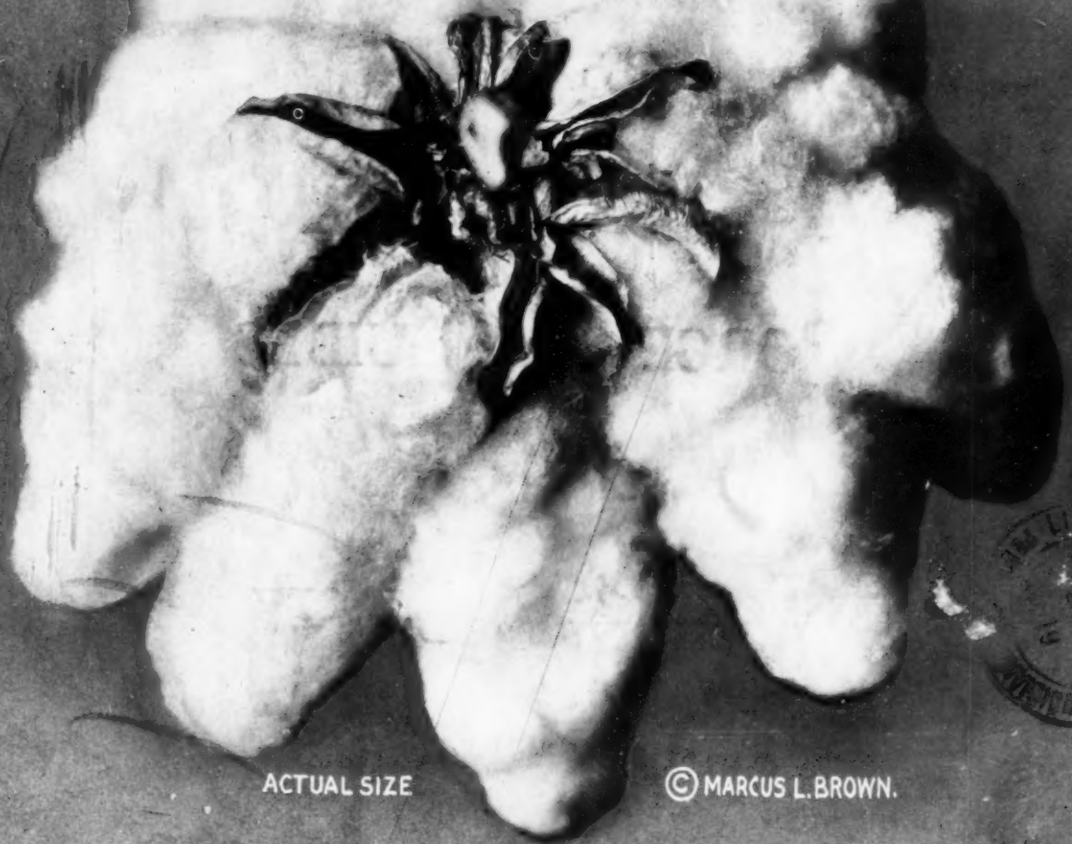
AMERICA'S LARGEST TEXTILE MONTHLY

# COTTON



ACTUAL SIZE

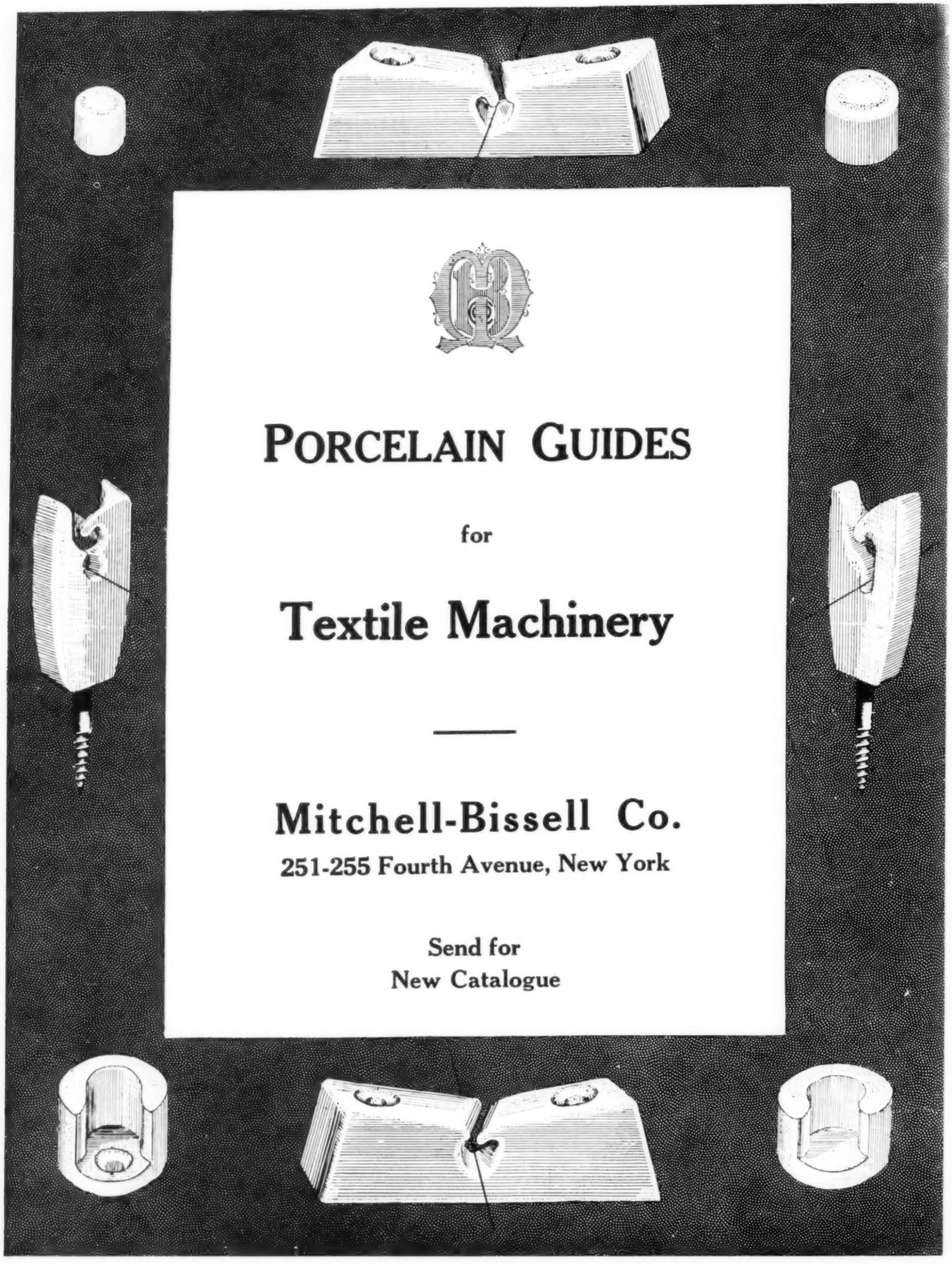
© MARCUS L. BROWN.

Valley Waste Mills
Hillside Cotton Mills, Owners
La Grange, Georgia.
Wholesale Contractors for and Vtilizers of
Cotton Mill Waste
Gason J. Callaway, Director Sales and Purchases

OCTOBER
1919

FIFTY CENTS
A COPY

Published Monthly by
W.R.C. Smith Pub. Co.
Dalton & Atlanta, Ga.


PORCELAIN GUIDES
for
Textile Machinery
Mitchell-Bissell Co.
251-255 Fourth Avenue, New York
Send for
New Catalogue

# THE NORTHROP LOOM

TRADE-MARK

meets the question of labor shortage by calling for less weavers in the weave room;

A Northrop loom weave room needs but 25 to 50 per cent. as many weavers as with common looms;

It goes far towards replacing the shortage in weave room production by its capacity to be operated without any weavers at all during the noon hour and a corresponding time night or morning;

It can be operated by less experienced help than the common loom;

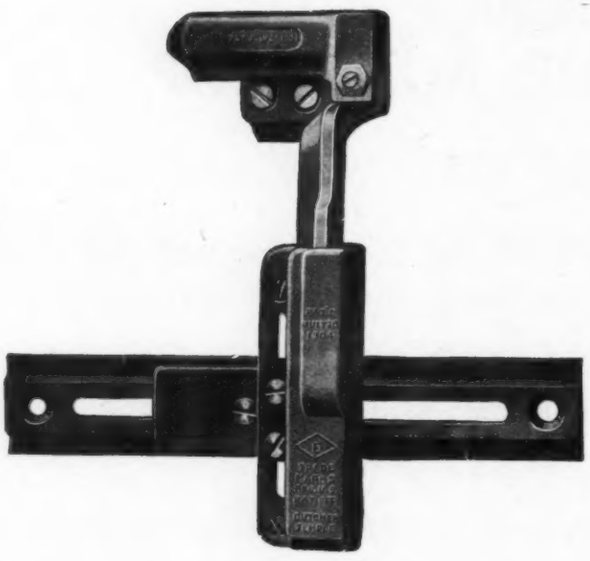
Bear in mind that the added saving in making high-priced cloth soon pays the increased cost of the looms compared with pre-war prices.

## DRAPER CORPORATION

HOPEDALE MASSACHUSETTS

**Southern Office**
188 South Forsyth Street Atlanta Georgia

Copyright 1917 by Draper Corporation



# DUTCHER TEMPLES

TRADE-MARK REG. U. S, PAT. OFF.

## DRAPER CORPORATION

SOLE MANUFACTURERS

## HOPEDALE MASSACHUSETTS

Southern Office
188 South Forsyth Street Atlanta Ga.

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# SACO-LOWELL SHOPS

## TEXTILE MACHINERY

EQUIPMENTS FOR BOTH

## Foreign and Domestic Trade

TO MANUFACTURE

## COTTON, SPUN SILK & WORSTED YARNS

**EXECUTIVE OFFICES, 77 FRANKLIN ST., BOSTON, MASS.**

FOREIGN SALES DEPARTMENT,
J. F. HAVEY, Manager.

DOMESTIC SALES DEPARTMENT,
P. D. HOWE, Manager.

SHOPS AT

LOWELL, MASS. BIDDEFORD, ME.
NEWTON UPPER FALLS, MASS.

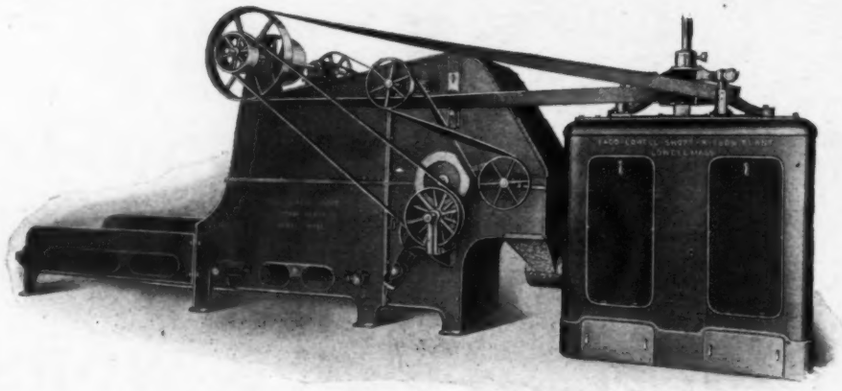
ROGERS W. DAVIS, Southern Agent
**CHARLOTTE, N. C.**

Southern Branch Office, GREENVILLE, S. C.

# SACO-LOWELL SHOPS
# Cotton Machinery

INCLUDING

OPENING, CONVEYING AND DISTRIBUTING EQUIPMENT



VERTICAL OPENER COMBINATION

PICKING ROVING WARPING
CARDING SPINNING SLASHING
DRAWING SPOOLING TWISTING

## Waste Reclaiming Machinery

SHOPS AT

LOWELL, MASS. BIDDEFORD, ME.
NEWTON UPPER FALLS, MASS.

EXECUTIVE OFFICES
BOSTON, MASS.

ROGERS W. DAVIS, Southern Agent, CHARLOTTE, N. C.

Southern Branch Office, GREENVILLE, S. C.

# SACO-LOWELL SHOPS

## BOSTON, MASS., U. S. A.

**FOREIGN DEPARTMENT, J. F. HAVEY, Manager**

## TEXTILE MACHINERY
## FOR EXPORT

**EQUIPMENTS FOR THE MANUFACTURE OF**

## COTTON, SPUN SILK and WORSTED YARNS

**(BRADFORD SYSTEM WORSTED YARNS)**

**We manufacture a complete line of Spinning Machinery adapted to the requirements of foreign mills and suitable for all grades of foreign cotton.**

**We have had a wide experience in the exporting of Textile Machinery and our foreign department embraces an organization familiar with all details of the export trade.**

**Special attention is paid to boxing and packing to secure minimum freight charges.**

**A large force of experts is maintained for supervising the installation of our product and to instruct permanent foreman in the proper operation of the machinery.**

**ESTIMATES FURNISHED FOR COMPLETE MILL EQUIPMENTS.**

**AGENTS AND REPRESENTATIVES:**

**CHINA**—Anderson, Meyer & Co., Ltd., Shanghai, China, and 80 Wall St., New York.

**JAPAN**—Saco-Lowell Shops, C. C. Hedrick, Resident Engineer, Osaka, Japan.

**SOUTH AMERICA**—(Except Venezuela and Columbia) W. R. Grace & Co., Hanover Square, New York.

**ITALY**—Geo. H. McFadden & Bro., Milan, Italy, and Philadelphia, Pa.

**SPAIN**—Jose Sindreu Y Oliba, Barcelona.

**EUROPEAN AND ASIATIC RUSSIA, FINLAND AND POLAND**—Alliance Trading Co., Ltd., London, England.

# Saco-Lowell Card Stripper

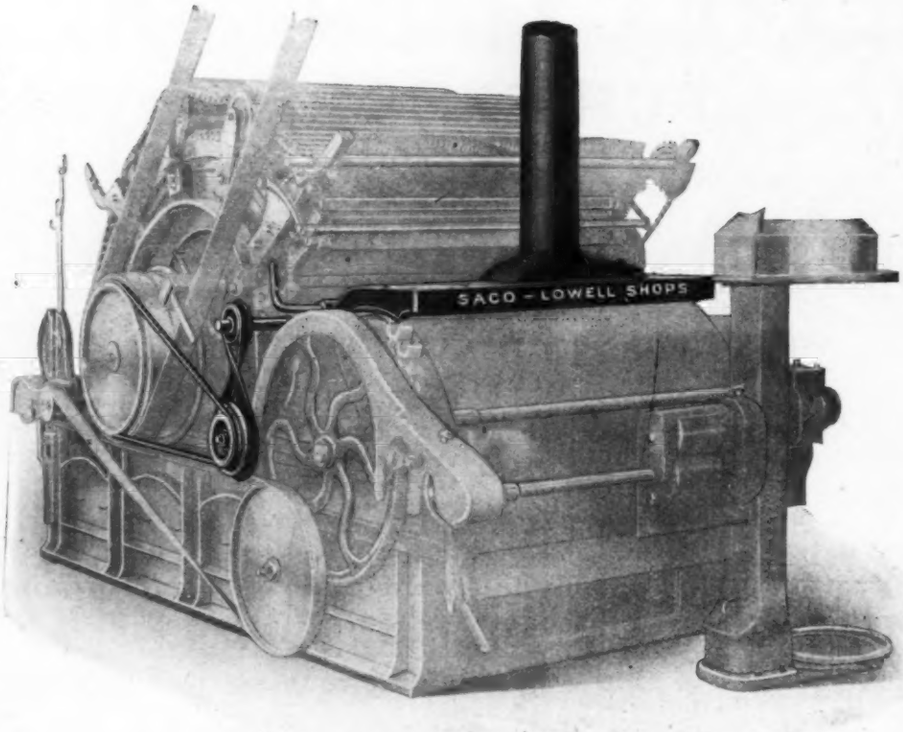
## DUSTLESS AND AUTOMATIC

### Leaves Strippings in Excellent Condition

Economical to Operate

Saves Time and Labor

Strips Cards Clean




Low Cost of Maintenance

Sanitary and Efficient

Control Always Absolute

CARD WITH STRIPPER APPLIED

**Simple Practical Durable**

*Full Information Furnished by*

## SACO-LOWELL SHOPS

### NEWTON UPPER FALLS, MASS.

OR

**Rogers W. Davis, Southern Agent, Charlotte, N. C.**

**Branch Office, Greenville, S. C.**

# STAFFORD AUTOMATIC LOOMS

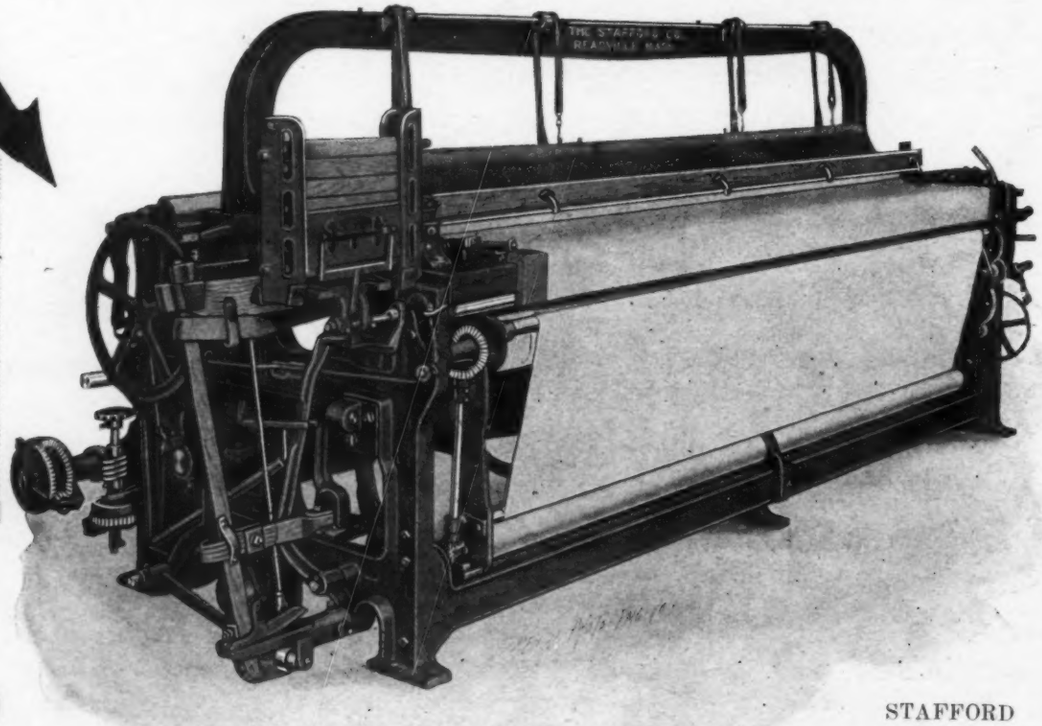
## Supreme in the Field of Automatic Looms

Stafford automatic looms set a new mark in the field of practical weaving machinery. They are produced in one of the most modern and complete plants in New England. A plant which is entirely self-sustained and which includes complete power-plant, machine shop, wood-working establishment, forge room, and one of the best equipped foundries in New England. The material used in manufacturing is subjected to rigid analyses and the entire process of manufacture is under the supervision of experts.

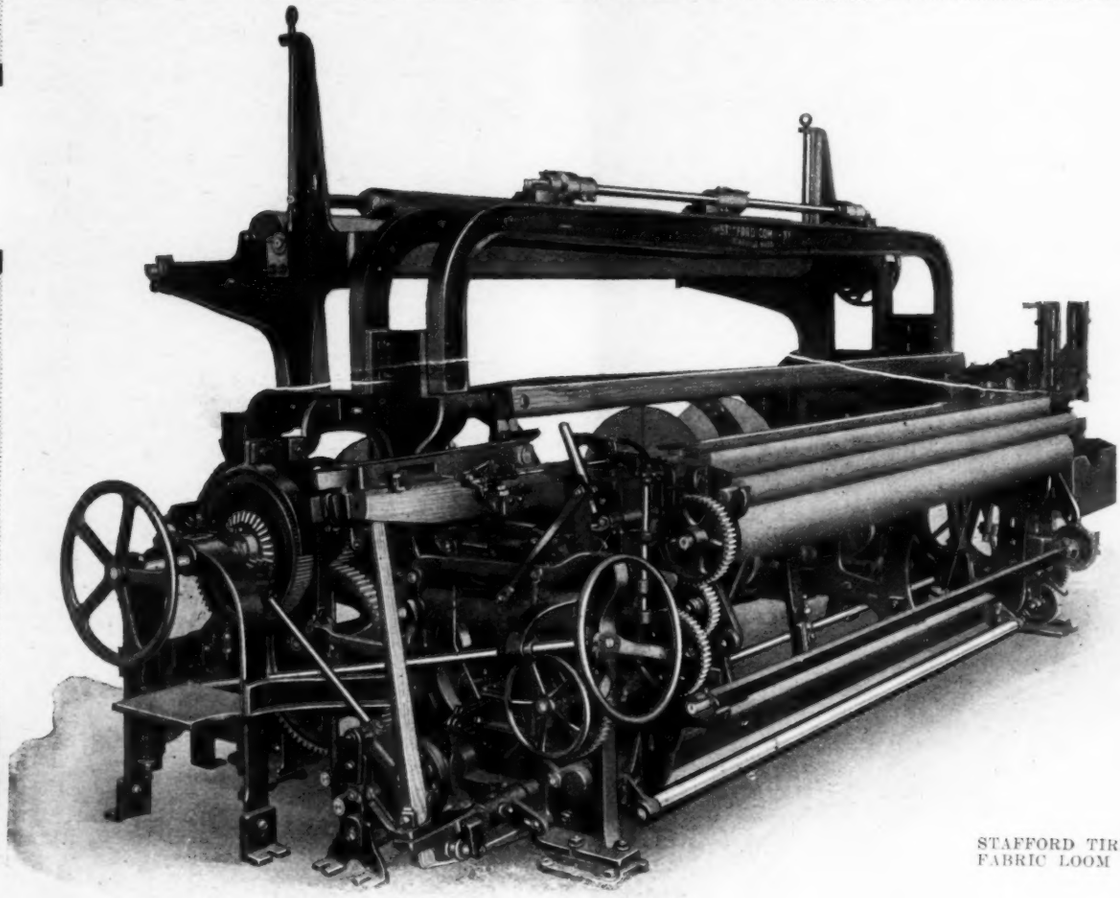
# STAFFORD

## High Quality of Fabrics

An important feature of Stafford automatic looms is the high quality of fabrics which they consistently turn out. This achievement is the result of years of constant effort on our part to produce a perfect plain loom; with this accomplished the automatic features were taken up with equal care and thoroughness. The result is that Stafford automatic looms are noted above all for their mechanical perfection, freedom from excessive breakage and for the wide variety of perfect fabrics which they produce.



STAFFORD
BROAD
LOOM



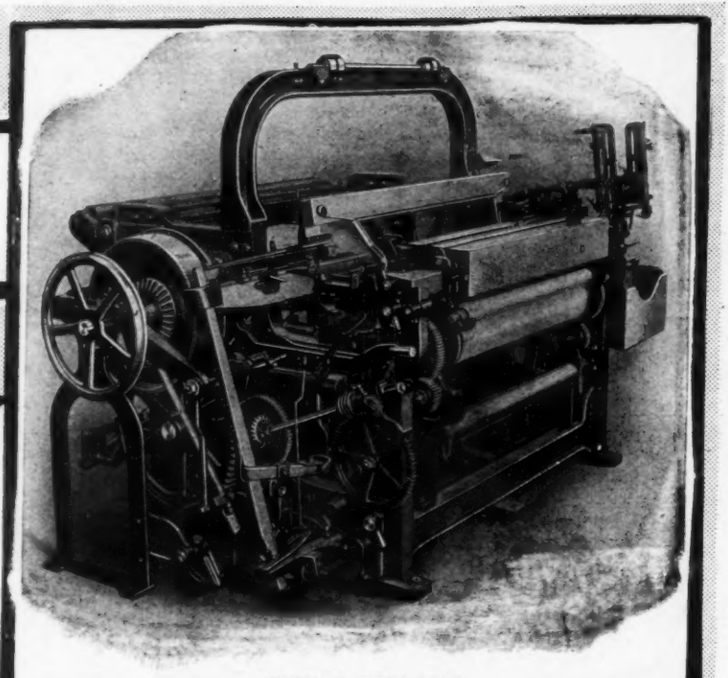
STAFFORD TIRE FABRIC LOOM

## Meet the Most Exacting Requirements

Tire fabrics produced on Stafford automatic looms will meet the requirements of the most exacting tire manufacturers. In this field perfection is of the greatest importance and the Stafford automatic is so designed as to successfully meet every test to which it can possibly be submitted.

# AUTOMATIC LOOMS

# Dependable Looms

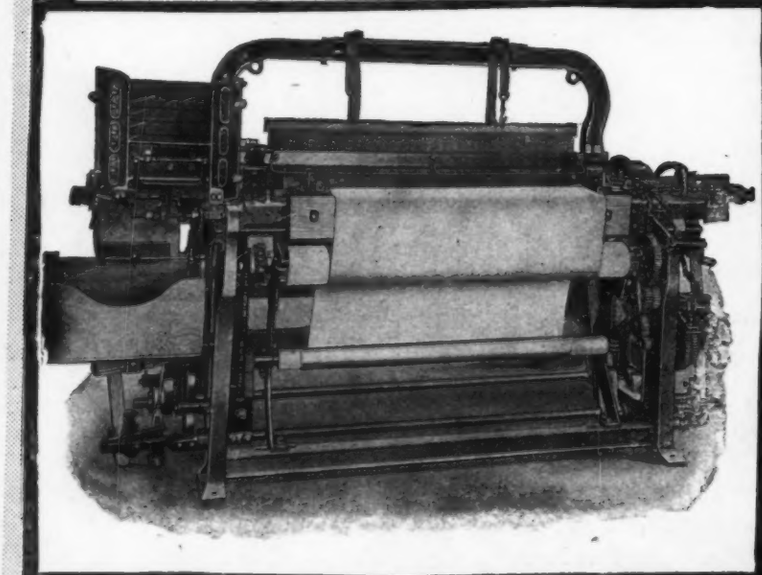


STAFFORD DUCK LOOM

## In a Word

The Stafford Company for a great many years has concentrated on the production of a strictly practical loom. Convincing proof of the soundness of this idea is found in the large list of repeat orders for Stafford looms from a steadily growing list of progressive mills both in this country and Canada.

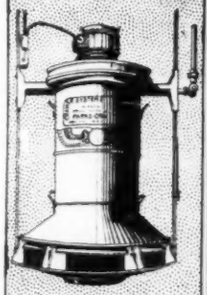
## THE STAFFORD COMPANY



Readville
Mass.

Southern Agent
J. H. MAYES
Charlotte
N. C.

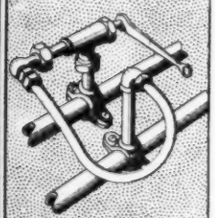
# PARKS-CRAMER Specials



IN THE industrial piping field, we have an accumulated knowledge and experience resulting from nearly half a century of activity. Many clients have benefited by placing their entire requirements in industrial and humidifier piping in our hands.

| HUMIDIFIERS | PIPING |
|---|---|
| Turbo Compressed Air | Power Plant |
| Cramer Spray | Mill and Factory Heating |
| Cramer High Duty | Factory Process Piping |
| Central Station | Vacuum Systems |
| Compressed Air Cleaning | Parko System Hot Water Heating |
| Automatic Humidity Control | Fuel Conservation |
| Automatic Temperature Control | Merrill Process Industrial Heating |
| Automatic Humidity and | Pipe Bending |
| Temperature Control | Parko and Welded Joints |
| Conditioning Rooms | Dye House and Dry Kiln |

Automatic Sprinkler and Fire Protection.



In August, 1918, The G. M. Parks Company bought out all the right and interest of Mr. Stuart W. Cramer in his humidifier business.

In recognition of Mr. Cramer's long activity in the business—the association of his name with so well known a product, and with the development of the science itself—the continuance of his name was sought by us, and acceded to by him.

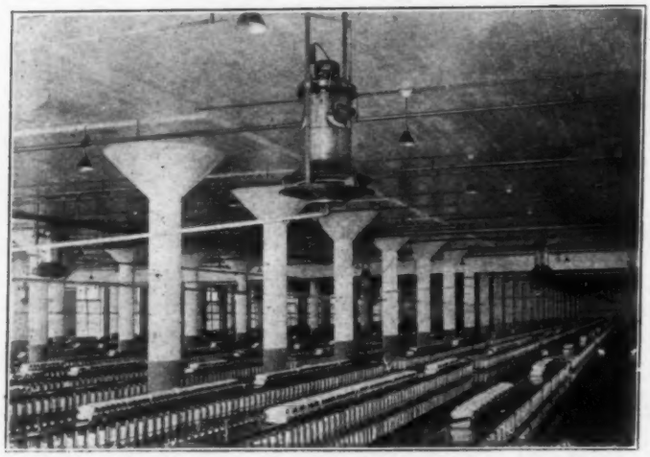
## Parks-Cramer Company

*Engineers & Contractors*

*Industrial Piping and Air Conditioning*

FITCHBURG ~ BOSTON ~ CHARLOTTE

# Modern Methods in Humidification



*As applied to this big Spinning Room. This mill has 72 cards, 41,000 Spindles, 1100 Looms*

This is the day of better building in all lines—the day of efficiency—the day of specialists.

Mills that have bought humidifying apparatus during the past twenty-five or thirty years have not been buying on a scientific basis—not always on a common sense basis. The result is their apparatus is not up to modern requirements.

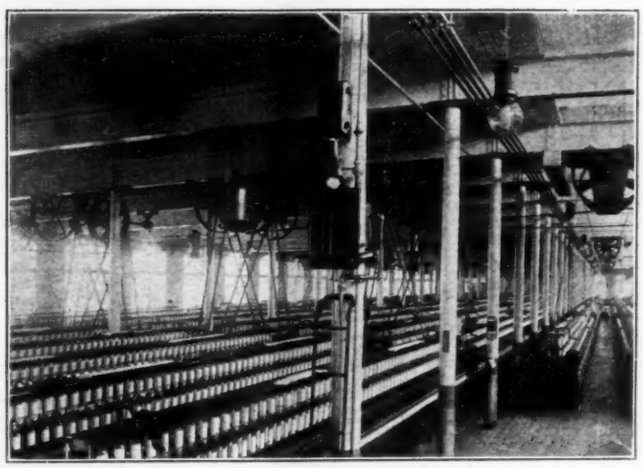
Any humidifying system is better than none at all, but at a conservative estimate 75 per cent of those now running are inadequate in capacity—not positively controlled—do not contain many necessary features required in present day textile manufacturing.

Parks-Cramer—specialists in humidification—offer you not only originality and modern efficiency in every air conditioning equipment, but the services of their engineers who undertake your whole problem of humidifying, heating, process and power piping. You get all the advantages incident to consolidation of all problems into one—one set of workmen—one house to deal with. Service—satisfaction—up-to-the-minute efficiency.

## Parks-Cramer Company

**Fitchburg** **Boston** **Charlotte**

# Humidity Positively Controlled



*Parks-Cramer Automatic. Huminity Regulators make for constant air conditions in this 130,000 spindle mill*

The hit-or-miss method of turning off or on the humidifiers by guess—by feel—is rapidly giving way to equipment regulated scientifically and automatically.

Unless your humidifiers—with regulation—give you results equal or better than those shown below, there is something more in modern humidification which you need. Look at these readings—taken just as things were:

| Station | Dry Bulb | Wet Bulb | Difference | Relative Humidity | Cotton Regain |
|---|---|---|---|---|---|
| 1 | 76 | 70 | 6 | 74 | 10% |
| 2 | 76 | 70 | 6 | 74 | 10 |
| 3 | 75 | 69 | 6 | 74 | 10 |
| 4 | 76 | 69 | 7 | 70 | 9½ |
| 5 | 76 | 70 | 6 | 74 | 10 |
| 6 | 76 | 70 | 6 | 74 | 10 |

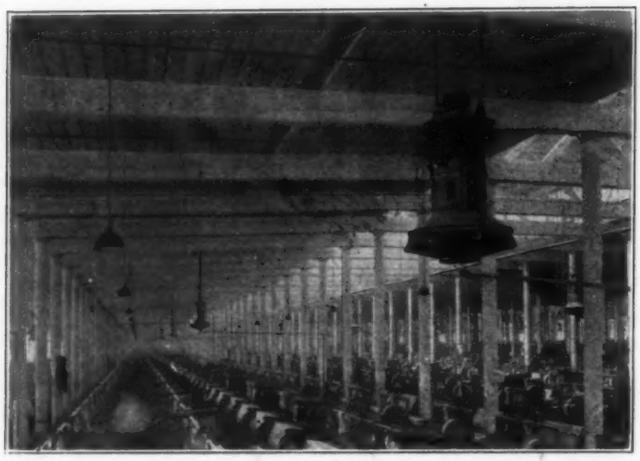
Automatic Humidity Regulation is not an experiment—nor is automatic temperature control—and these, together with plenty of surplus capacity are the requisites of better air conditioning—assuring results that mean profits to you.

As pioneers and specialists in these factors, we shall be glad to tell you and show you how to bring your system to that efficiency enjoyed by others in your line.

# Parks-Cramer Company

**Fitchburg** **Boston** **Charlotte**

# Is Your Humidifier System Profitable?



*Parks-Cramer Humidifiers in the largest weave shed in the South. 138,000 spindles 245 cards, 3000 looms*

Don't think, just because you have a humidifying equipment, that you have gotten all there is out of it—that you cannot make humidification more profitable to you.

One manufacturer who was already equipped with a humidifying system that he thought was perfect as possible, installed Parks-Cramer equipment and saved $28,000.00 the first year.

We have made much and exhaustive study of the subject—have learned much during the past few years particularly—and feel sure that, even if you now have humidifiers, there is something more in humidification for you, something that means more profits.

The only way to know whether your equipment is bad or good is to let a specialist look it over and dissect your problem not only scientifically but professionally. You want to have the best system—best fitted to your particular problem. Avail yourself of our experience and service.

## Parks-Cramer Company

**Fitchburg** **Boston** **Charlotte**

# H. & B. AMERICAN MACHINE COMPANY

PAWTUCKET, R. I.

C. E. RILEY, President
161 Devonshire St.
Boston, Mass.

SOUTHERN OFFICE
814-816 Empire Building
Atlanta, Georgia

# COTTON MACHINERY

HOPPER BALE OPENERS, FEEDERS, OPENERS, BREAKER LAPPERS, INTERMEDIATE AND FINISHER LAPPERS

REVOLVING FLAT CARDS, DRAWING FRAMES, SLUBBING FRAMES, INTERMEDIATE AND ROVING FRAMES

NEW PATTERN SPINNING FRAMES (Tape or Band Driven)
IMPROVED TWISTERS, for Wet or Dry Work
WARPERS, SLASHERS

CONSTANT and conservative improvements in details of construction, close touch with actual mill requirements and conditions, and a careful selection of material particularly adapted for the building of Cotton Machinery, place us in a position to offer the best.

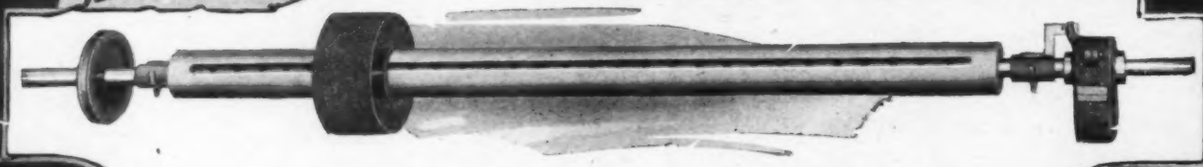
We invite, with every confidence, all possible investigation into the construction and improved design of our machinery, and the work it is doing in the mills. The entire line of machinery is substantially built, very simple, and contains many valuable improvements.

There are many features and points of special merit embodied in our machines which it would pay you to investigate because they all stand for durability, simplicity, improved quality and increased quantity. They are not mere talking points, but money earning improvements.

WE INVITE YOUR INVESTIGATION AND COMPARISON

*Send for Descriptive Circulars, with List of Users*

# ROY GRINDERS



WE ARE grinder speciaiists giving our entire time to the manufacture of one thing—GRINDERS.

That is why Roy Grinders are recognized as the standard.

Our position in the industry which we attained by over fifty years of specialization on such machines permits no compromise.

By countless experiments and the embodiment of every improvement in our grinders that these tests have proven we believe we are now offering mill men the highest type of Card and Napper Roll Machines it is possible to produce.

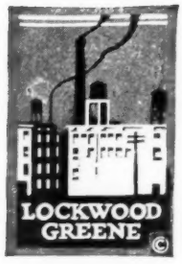
The hearty endorsement of mills which lead the Textile Industry is conclusive evidence of Roy Efficiency and Service.

1868 1919

**B. S. ROY & SON CO.**

**Worcester, Massachusetts**

**ESTABLISHED 1868**




## *"Building With Foresight"*

Since 1832, the organization now known as Lockwood, Greene & Co., Engineers, has been vitally interested in textile engineering.

Many of the earliest cotton mills in this country were designed by us. In 1893 we designed the first cotton mill to be electrically driven from water wheels at Columbia, S. C., and in 1895 the first mill to be electrically driven from steam at Clinton, Mass. The first large reinforced concrete cotton mill in this country, the Maverick Mills at East Boston, Mass., was erected under our supervision in 1911.

Today cotton mills from Maine to Texas, including some of the largest in America, testify to Lockwood, Greene & Co. ideas and methods successfully applied, both to construction and equipment. Our constant employment as Managers of many of these plants enables us to work out new ideas in actual practice to the point of proved success.

Our textile engineering service includes not only engineering in every phase, and industrial architecture, but expert appraisals and reports, industrial relations, the proper housing of employes, and many other subjects related to production problems.

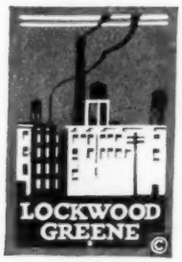
*Lockwood, Greene & Co.*

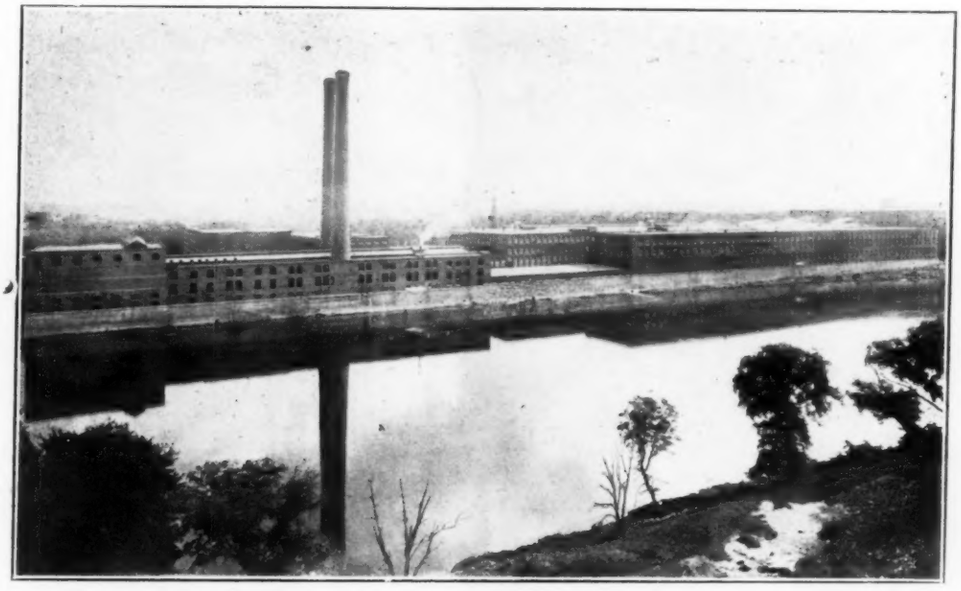
*Engineers-Managers*

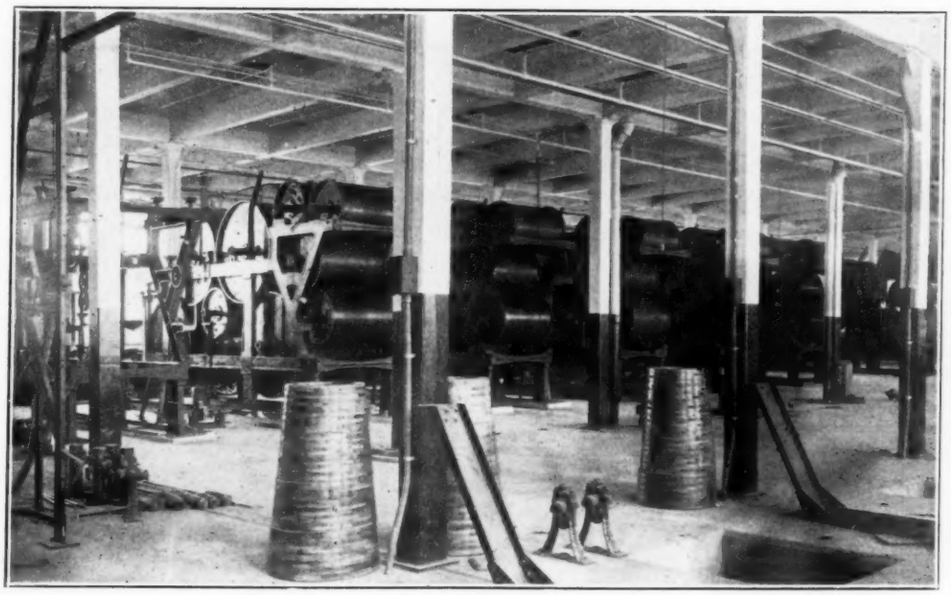
Boston, 60 Federal St. Chicago, 38 S. Dearborn St. New York, 101 Park Ave.
Atlanta, Healey Bldg. Detroit, 45 Washington Boulevard.
Hartford, Conn., 27 Lewis St. Cleveland, 418 Bangor Bldg.

Lockwood, Greene & Co., of Canada, Ltd., Canada, P. Q.
Compagnie Lockwood, Greene, 47 Ave. De L'Opera, Paris, France.

The Naumkeag Steam Cotton Co., Salem, Mass. A plant of 100,000 spindles, the most complete and economical in the world. It manufactures the famous Pequot sheetings.

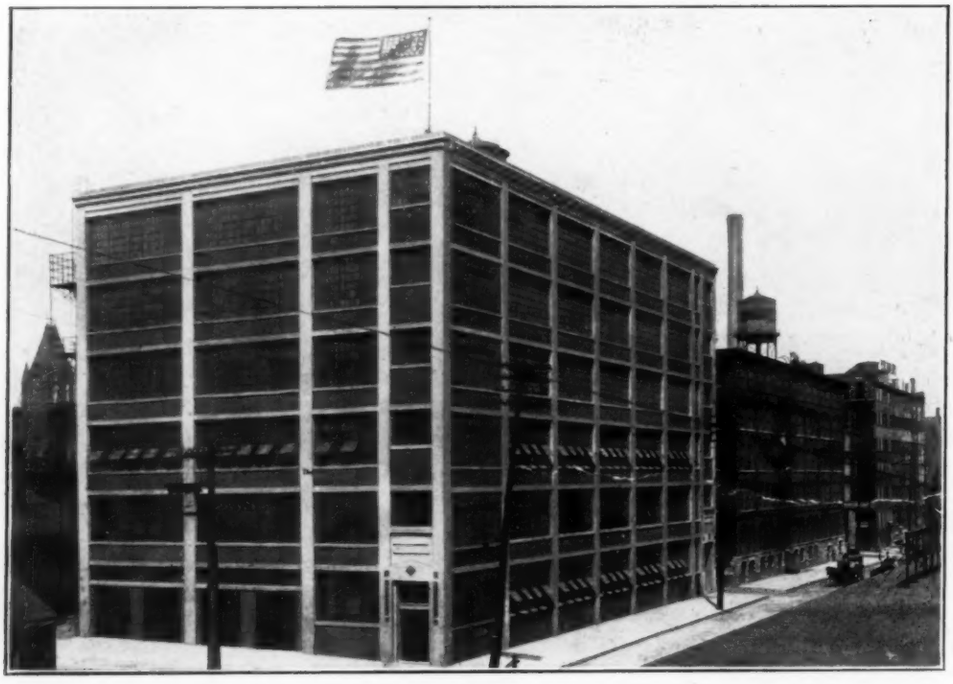


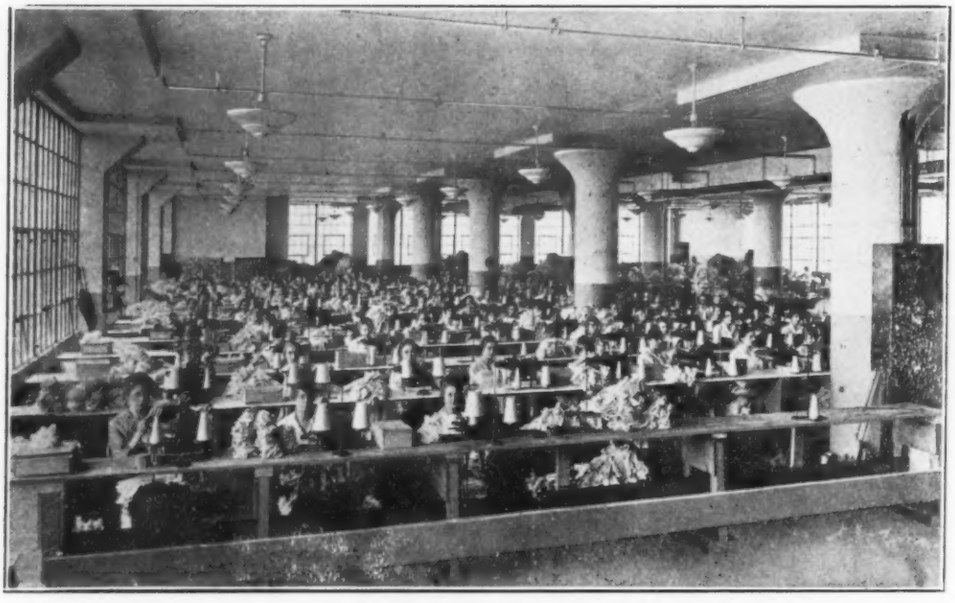





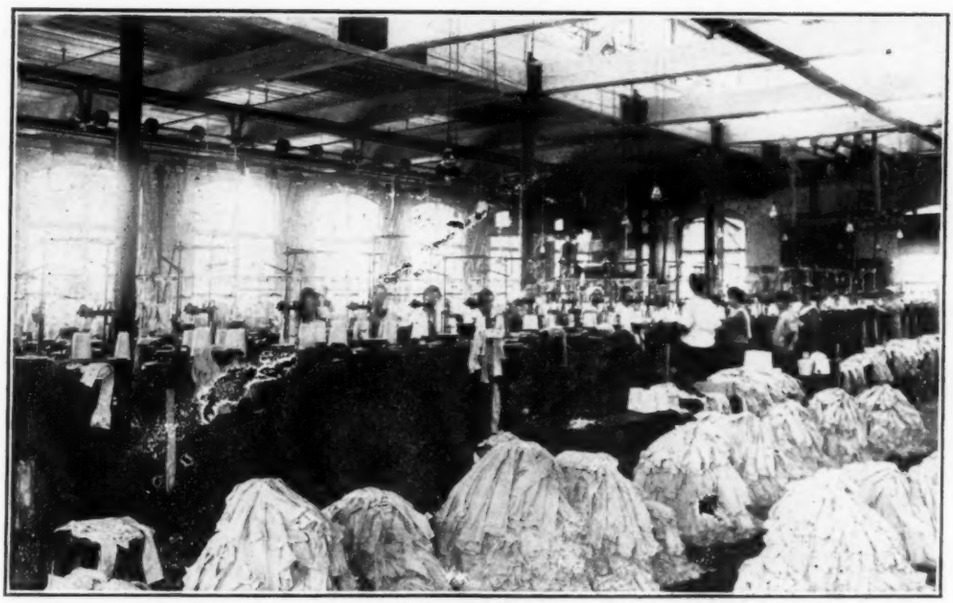
The Pacific Mills Print Works, Lawrence, Mass., the largest textile finishing plant in the world. It covers 23 acres and consists of bleachery, dye house and print works. The interior picture shows a part of the series of print dryers.

LOCKWOOD GREENE ©

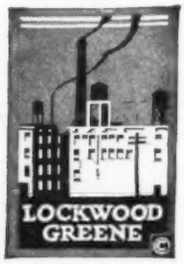


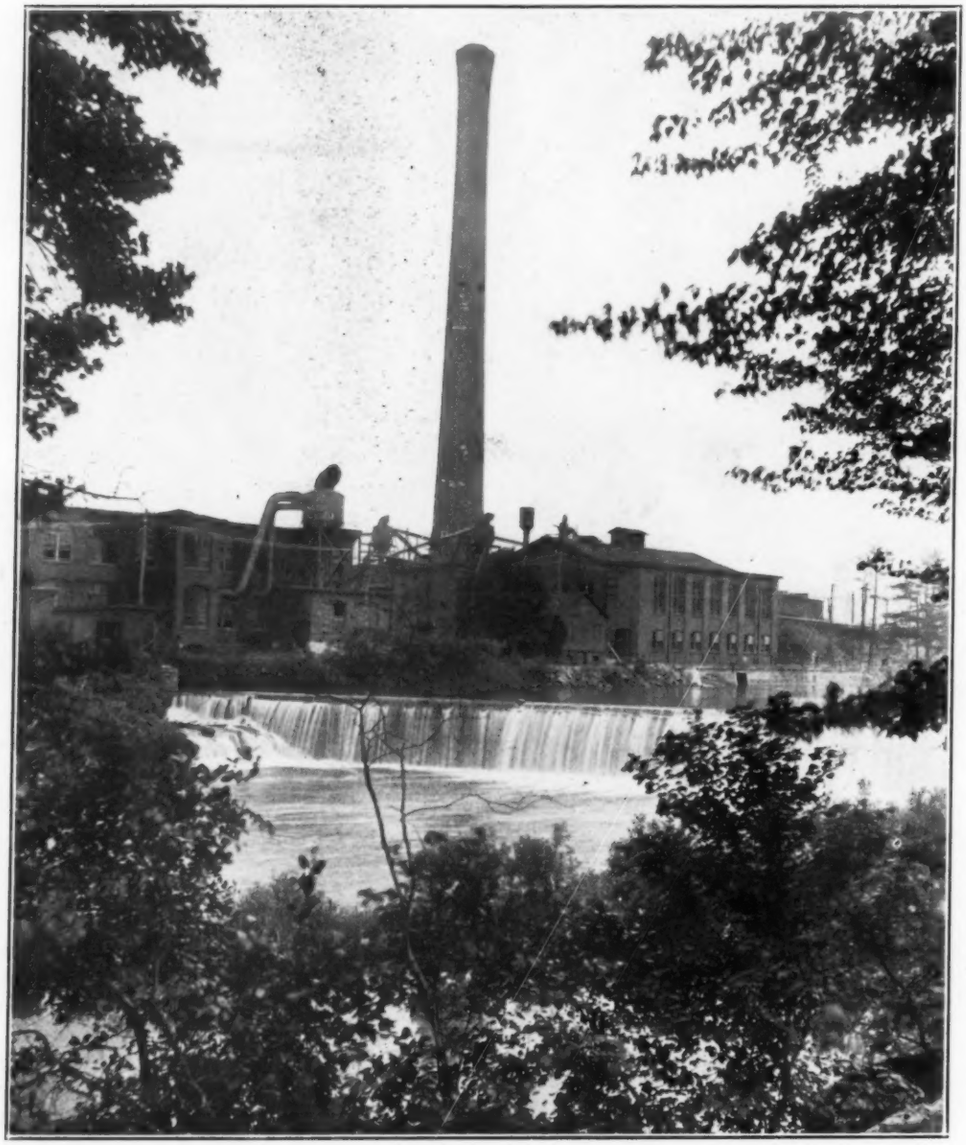


The Holeproof Hosiery Company, Milwaukee, Wis. A new building embodying the latest features of construction, lighting and ventilation, with special attention to the needs and comforts of employees.

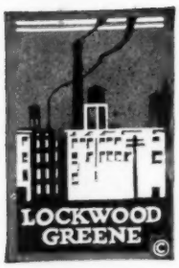


The Anniston Knitting Mills, Anniston, Ala., A typical southern hosiery mill of slow burning construction, with dye house in the rear. Here is a combination of substantial appearance, economy of construction and excellent light and ventilation.

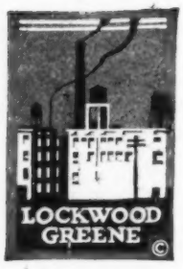


The Ludlow Manufacturing Associates, Ludlow, Mass., manufacturers of jute bagging and cordage. Here is an excellent example of a steam power plant designed to work in harmony with existing steam and water power plants owned by this company.



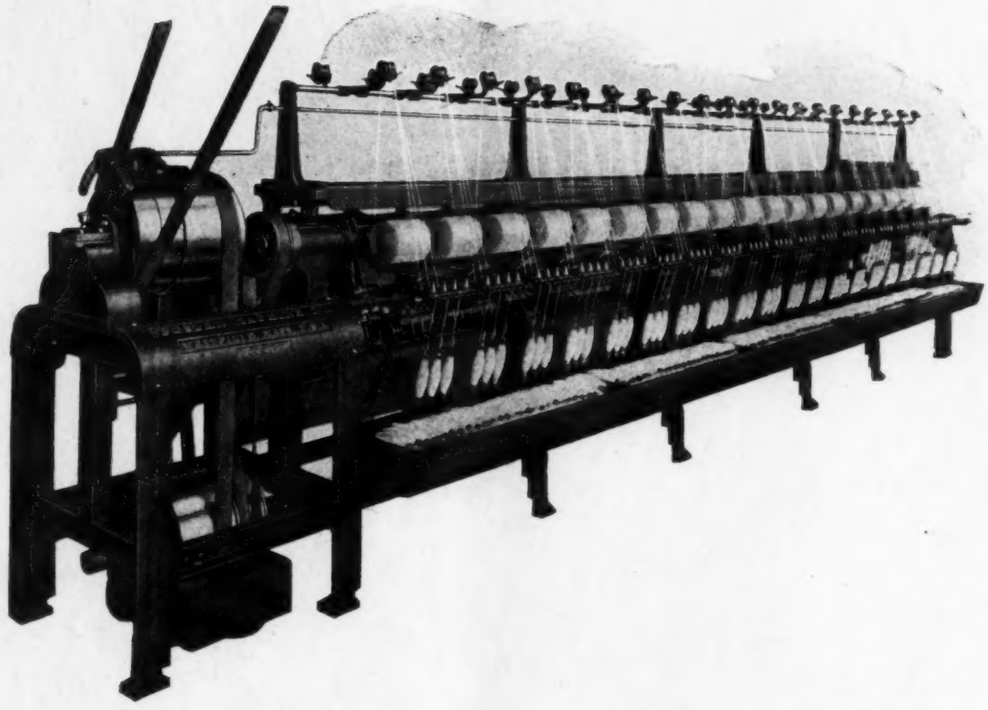

*Lockwood Greene & Co.,*
*Managers*




*Lockwood, Greene & Co.,*
*Managers*

# FOSTER MACHINE CO.

## Westfield, Mass.



**Builders of**

CONE WINDERS
TUBE WINDERS
DOUBLERS and
WARP GASSING MACHINES

All Foster Products are of simple, sturdy construction, designed to operate at highest efficiency under present day hard manufacturing conditions.

JOHN HILL, Southern Representative, Healy Bldg., Atlanta, Ga.

# WHITIN MACHINE WORKS

ESTABLISHED 1831.

TEXTILE MACHINERY

## Manufacturers of the Following Machines

COTTON MACHINERY

Opening
Conveying
Distributing
Picking
Revolving Flat Cards
Silver Lap Machines
Ribbon Lap Machines
Combing Machines
Drawing Frames
Roving Frames
Spinning Frames
Spoolers
Twisters
Reels
Quillers

COTTON WASTE MACHINERY

COTTON AND WOOLEN SYSTEMS

Openers
Pickers
Willows
Card Feeds
Full Roller Cards
Condensers
Revolving Flat Cards
Derby Doublers
Roving Frames
Spinning Frames
Spoolers
Twisters
Special Spinning Frames

WOOLEN MACHINERY

Card Feeds
Full Roller Cards
Condensers
Wool Spinning Frames

WORSTED MACHINERY

Cone Roving Frames

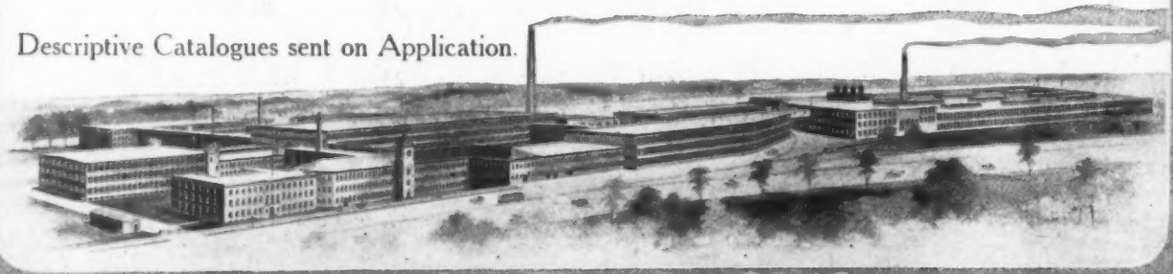
**ALSO MAKERS**

**of Rings, Spindles, Flyers, Saddles and Hank Clocks**

**FOR ALL MAKES**

**of Spinning, Twisting and Roving Frames**

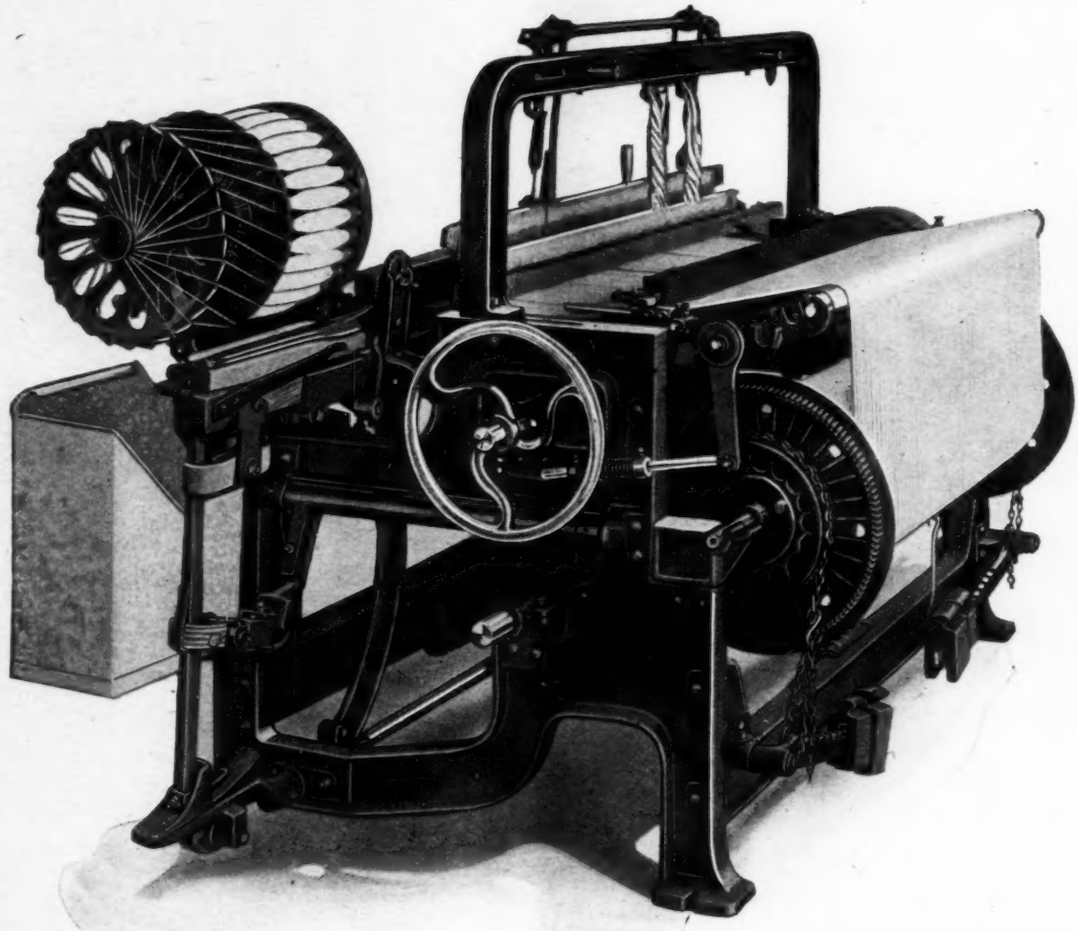
Descriptive Catalogues sent on Application.



MAIN OFFICE AND WORKS

WHITINSVILLE, MASS., U.S.A.

SOUTHERN OFFICE CHARLOTTE, N.C.



# The Nordray Loom Is New:

## Newly Designed:

**Built in a new shop with new tools.**

**We still advise the owners of good plain looms to save cost by adoption of our automatic attachments.**

HOPEDALE MFG. CO., MILFORD, MASS.

# Crompton & Knowles Loom Works

## LARGEST BUILDERS OF PLAIN AND FANCY LOOMS IN THE WORLD

*General Offices and Works:*

WORCESTER, MASSACHUSETTS, U. S. A.

*Branches:*

PROVIDENCE, R. I. PHILADELPHIA, PA.

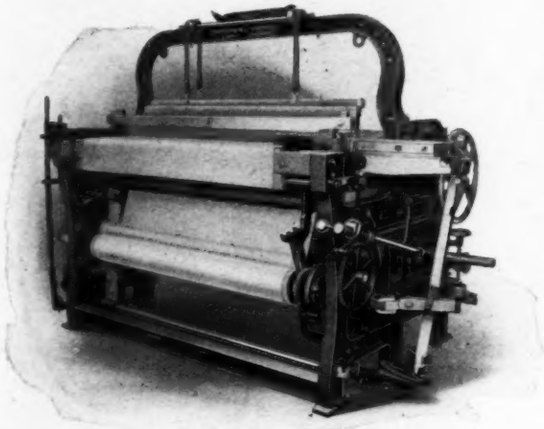
PATERSON, N. J.

*Southern Representatives:*

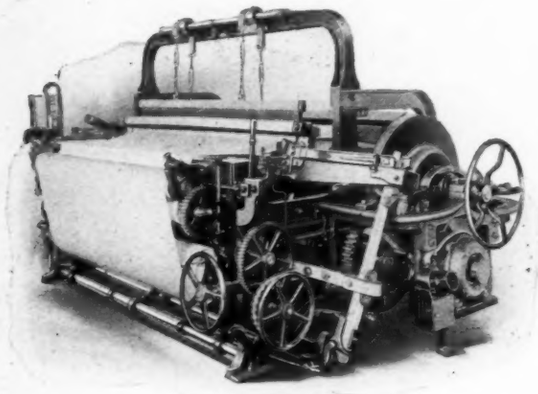
ALEXANDER & GARSED, Charlotte, N. C.

*Representatives for South America and India:*

W. R. GRACE & Co., New York, N. Y.



PLAIN COTTON LOOM



AUTOMATIC SHUTTLE CHANGING DUCK LOOM

# *"Looms for Weaving Every Known Fabric"*

THERE is a different type of CROMPTON & KNOWLES loom made for weaving every kind of fabric.

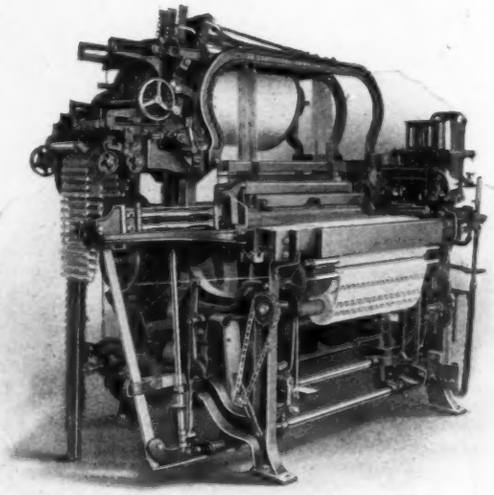
All varieties of cotton fabrics, including lawns, voiles, drills, denims, ginghams, towels, cotton blankets, duck, tire fabric, etc., are woven on Crompton & Knowles looms.

The Automatic Bobbin Changing Looms for weaving ginghams, towels, blankets, etc., and the Automatic Shuttle Changing Looms for weaving tire fabric, duck, etc., represent the latest development in weaving machinery, and thereby increase production and lower manufacturing costs.

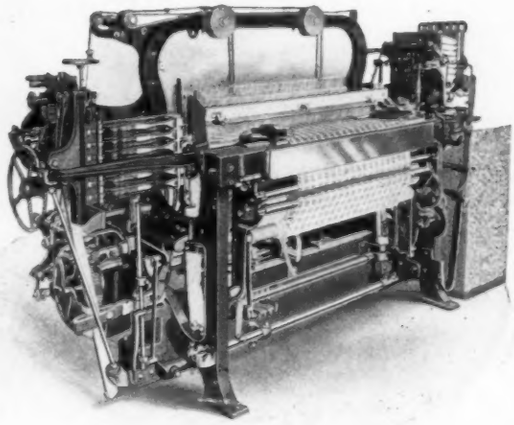
Crompton & Knowles Loom Works also build looms for weaving woolens, worsteds, flannels, blankets, silk, dress goods, plush, velvet, carpets, rugs, tape, webbing, ribbons, belting, etc.

## CROMPTON & KNOWLES LOOM WORKS

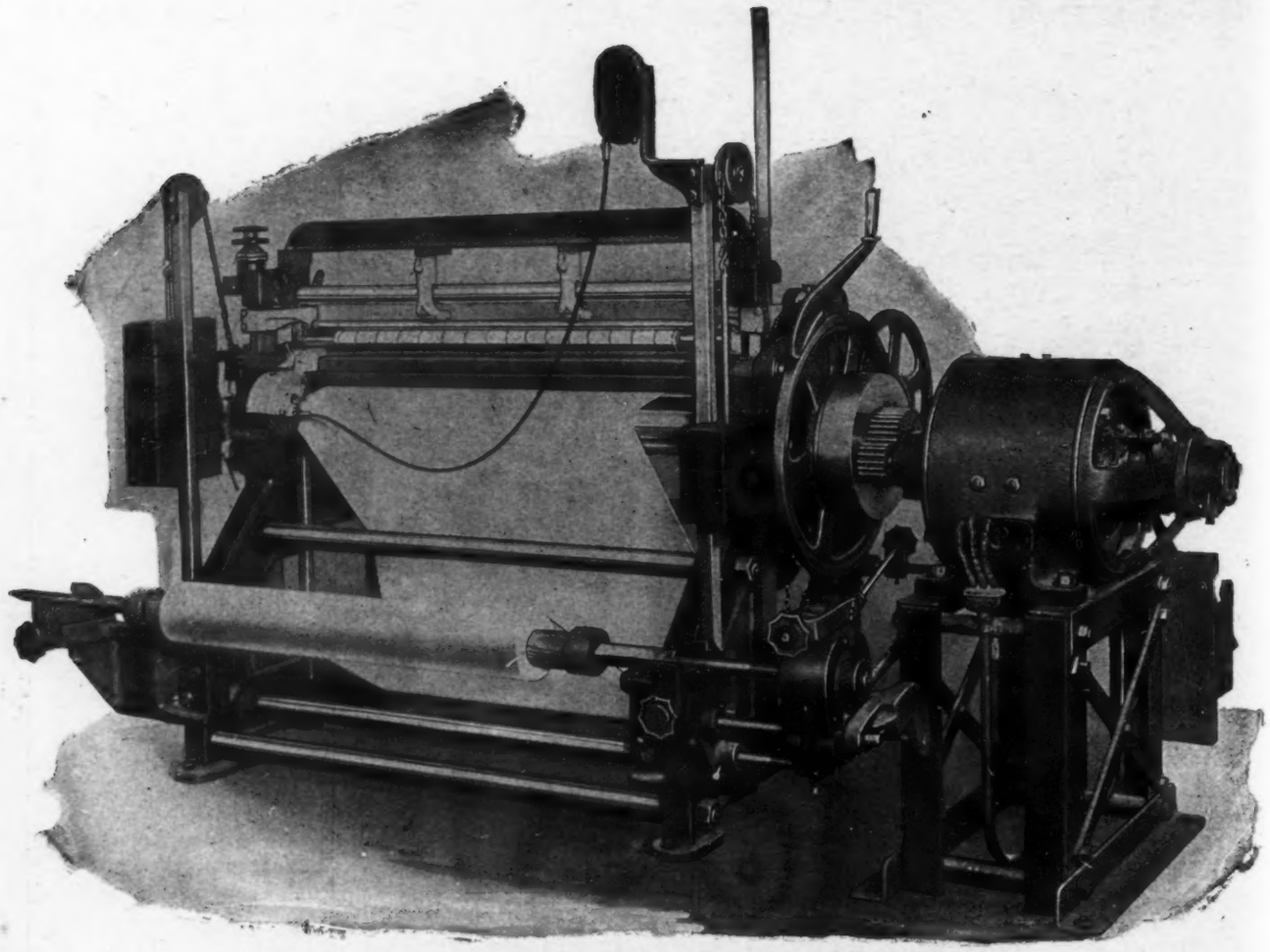
WORCESTER, MASS., U. S. A.



AUTOMATIC BOBBIN CHANGING TOWEL LOOM



AUTOMATIC BOBBIN CHANGING GINGHAM LOOM



# CAMERON

## SLITTING AND REWINDING MACHINE

**for converting wide webs into firm rolls of strip**

The enormous demand for material in the form of strip in rolls or coils has made the Cameron Principal Slitting and Rewinding Machine an important part of the textile manufacturer's equipment. If one considers only briefly, the many uses for strip or tape cut from broad webs of various materials, the list would be a very long one indeed. Manufacturers of flags, automobile tires, typewriter ribbons, canvas belting, carriage and auto tops, upholstery, surgeons' bandages, manufacturers of electrical insulation, tape, corset manufacturers and the immense requirements of the manufacturers of clothing, shoes, underwear, bindings, and trimmings make the Cameron Machine a profitable investment for the up-to-date textile mill man. The market for goods furnished in this form seems to be unlimited.

The Cameron Machine can be hooked up to your present machines and is capable of converting over ten thousand yards of wide fabric into strips, per day.

Let us send you interesting particulars, catalog and other literature.

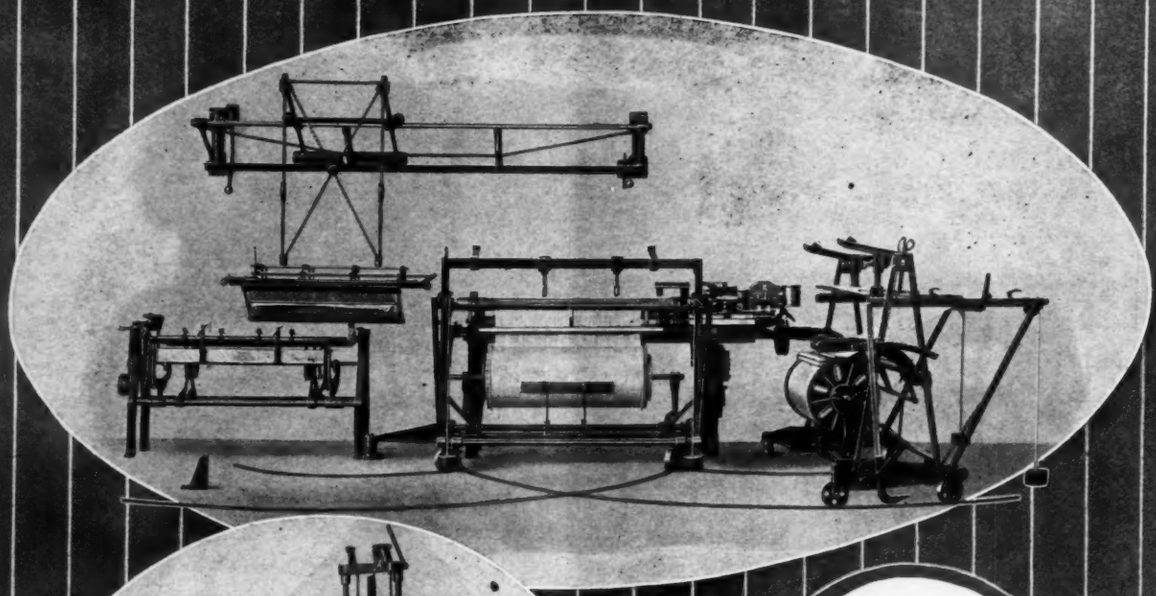
## Cameron Machine Company

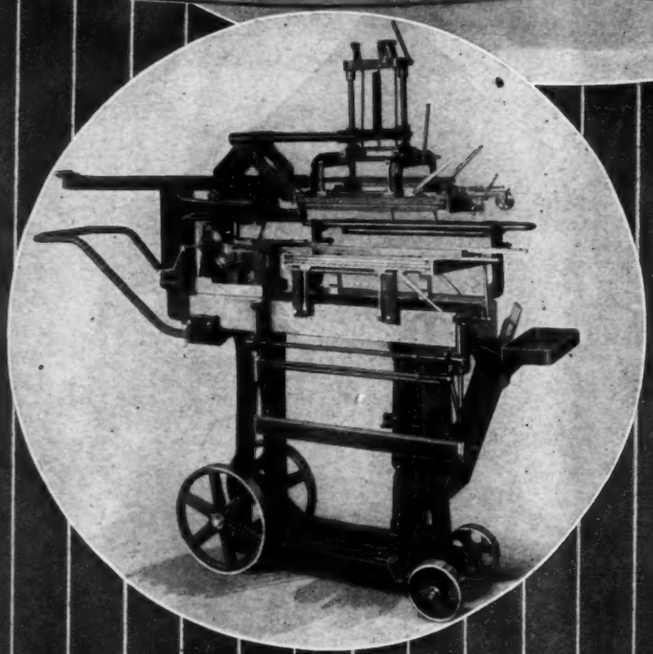
**57-61 Poplar Street, Brooklyn, N. Y.**

**Canadian Agents: Toronto Type Foundry, Ltd., Toronto, Canada.**

**British Agents: Canadian-American Machinery Co., 8 Bouverie St., London, Eng.**

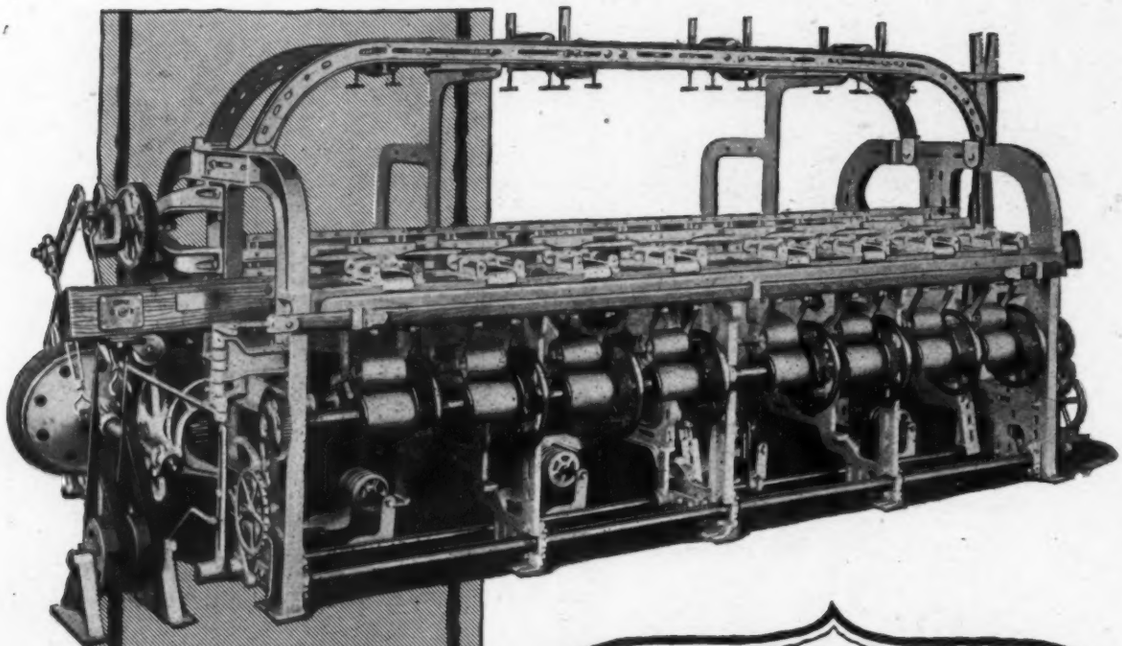
# BARBER-COLMAN
## WARP TYING MACHINES





**BARBER-COLMAN**
**Warp**
**Tying**
**Machines**
Have tied their way to success.
For quality and quantity production they are unexcelled.

**BARBER-COLMAN COMPANY**
**ROCKFORD, ILL. U.S.A.**



# MEDIUM WEB LOOM—

This loom covers the requirements for webbing and asbestos brake-linings—the four space loom will weave fabric 8″ wide; the six space loom 4″ in width, eight space loom 3″ wide, ten space loom 2″ in width. One operator takes care of two of these looms.

Write for further information about looms for weaving all narrow fabrics.

## FLETCHER WORKS

**Formerly SCHAUM & UHLINGER**

**Glenwood Ave. and 2nd St.**

**PHILADELPHIA, U. S. A.**

# U S Bobbin & Shuttle Company

**57 Eddy Street, PROVIDENCE, R. I.**

**Manufacturers of**

Speeders, Skewers, Warp Bobbins, Filling Bobbins, Cap Spinning Bobbins, Northrop Loom Bobbins, Twister Bobbins, Twister Spools, Warper Spools, Comber Rolls, Quills, Underclearer Rolls (plain or covered)

---

# Shuttles

Our "STETSON" patented hand threading shuttle is the best on the market. Repeat orders attest to its merits. Will be pleased to furnish samples upon request.

---

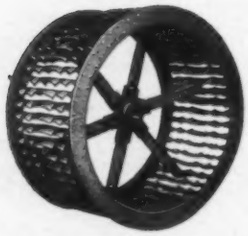
We also make shuttles for Draper, Stafford, and Crompton & Knowles Looms, and would be glad to furnish samples upon request.

---

Correspondence solicited on all matters relating to bobbins for Textile Mills.

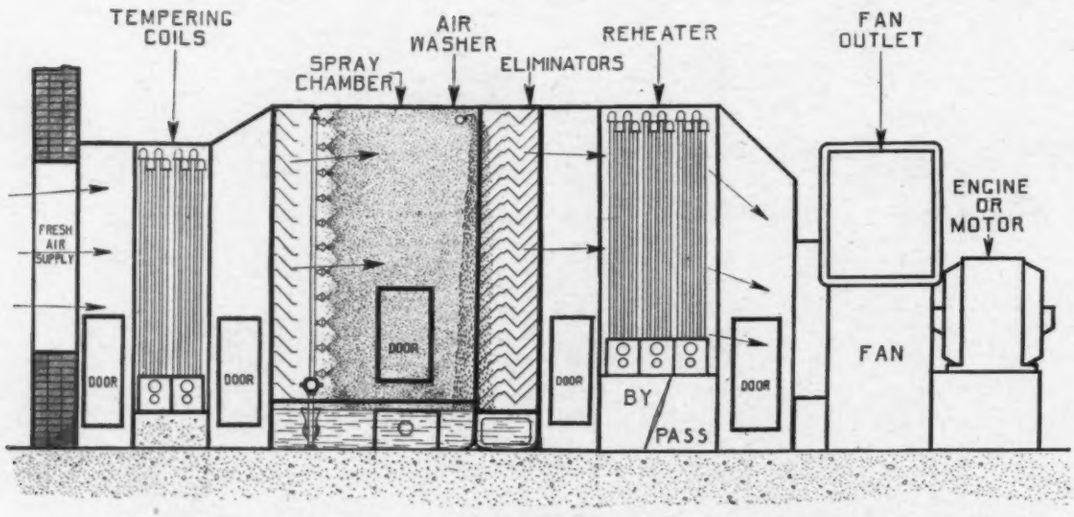
# "Climate a La Carte"

***Pick out the ideal climate for your business and we will reproduce it 365 days in the year.***



*Multivane Fan Wheel, cup shaped vanes (patented) displace large volumes of air at small cost.*

Temperature and moisture detrimentally affect material. As "air specialists" and "doctors of climate" Sturtevant apparatus plus F. L. service will cure—economically and efficiently—all conditions of "sick" air. Scores of industrial plants have already benefited from the services of our "climate doctors." Manufacturing supremacy awaits now—the cotton manufacturer first to utilize this science of air conditioning.




Typical Sturtevant Heating, Ventilating and Air Conditioning System.

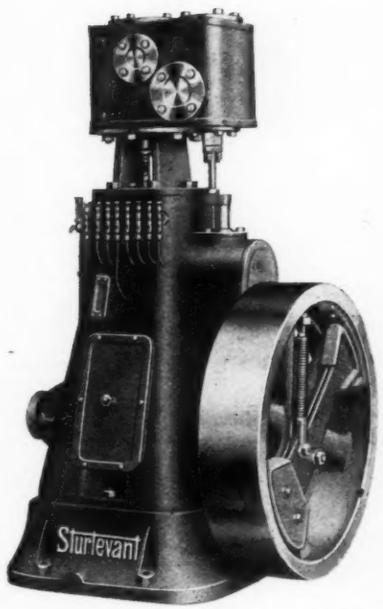
# Sturtevant

(REG. U.S. PAT. OFF.)

# 10 Reasons Why Air Conditioning

**will speed up your production and profits**

1—Standardizes manufacturing processes.
2—Eliminates moisture surrounding product.
3—Eliminates static electricity.
4—Regulates the amount of moisture in the finished product.
5—Materials dried irrespective of weather conditions.
6—Accelerates and standardizes the sprouting and growth of plants.
7—Cools or heats temperature to suit manufacturing process.
8—Air is washed and kept dust and gas free.
9—Maintains constant air conditions where delicate tests are made.
10—Hastens the oxidation of paints and varnishes.




*Sturtevant VS-7 Steam Engine. Compact—Quiet—Dependable. Used for direct connection to Fans, Blowers, Generators, and for independent power service.*

**Engineering Service**

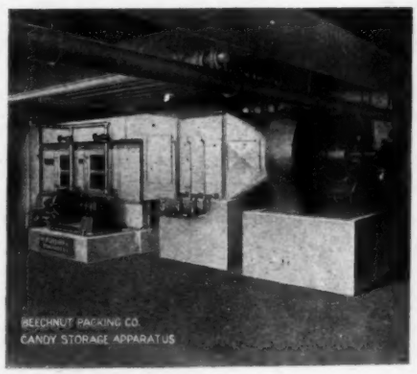
Air conditioning systems designed, plans and estimates submitted without obligation on your part. 22 Sturtevant engineering service stations conveniently located in all the leading business centers.

*Request our representative to call. Catalogue and "The Climate Doctors" (a proof story of air conditioning with illustrations of successful installations) will be mailed to you. Where? Write today.*

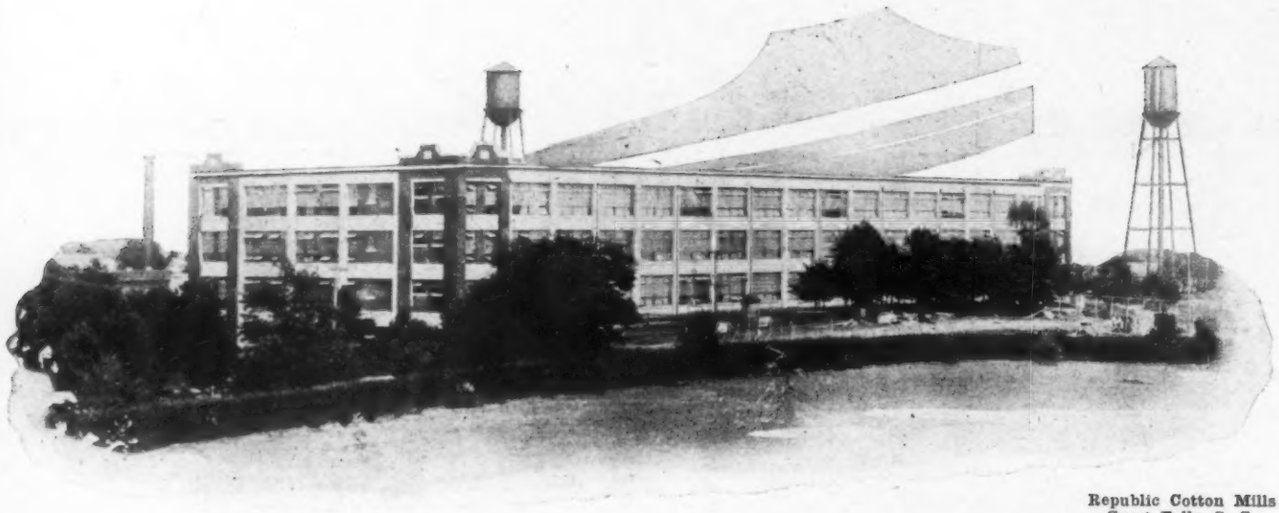
## B. F. STURTEVANT COMPANY

**HYDE PARK, BOSTON, MASS., and all Principal Cities.**

LARGEST BUILDERS OF FANS, FAN SYSTEMS and ALLIED PRODUCTS.



# Apparatus



Republic Cotton Mills
Great Falls, S. C.

# Clean Air for Greater Production

Clean air is a big, important factor in the operation of textile mills.

Satisfied employees, high quality goods and increased production depend to a great extent on the air furnished.

"Sirocco" TRADE MARK. equipment is in use in the Republic Cotton Mills, Great Falls, S. C., as well as in a large number of other textile mills in various parts of the plants. "Sirocco" Fans are used in dye-rooms to remove excess heat, vapors and noxious gases. They are used in the fleecing-rooms and other departments, where fine dust is constantly arising, to keep the air clear and free from foreign substances.

"Sirocco" Air Conditioning apparatus insures the right temperature in all parts of the mill, winter and summer—and a consequent saving in operating costs.

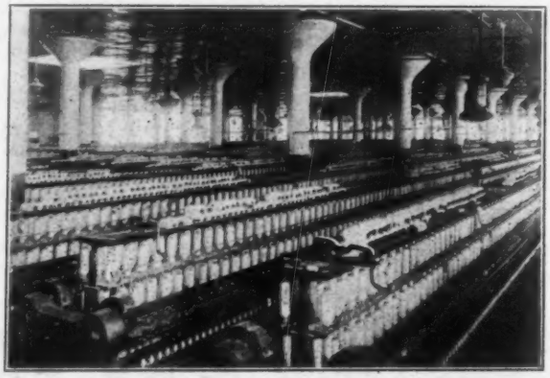
We will be glad to furnish further information regarding our products or our engineers, one of whom is located in your section, will cooperate with you to the fullest extent on any proposition in which "Sirocco" equipment is being considered.

## American Blower Company

**DETROIT :::: MICHIGAN**

**Canadian Sirocco Company, Ltd.**
**Windsor, Ont.**

***Branches in All Large Cities***



Interior View Republic Cotton Mills. Several Sirocco Fans Are in Use Throughout the Mills.

# 1888 1919

# Established Reliability in Humidification

The development of our systems has always kept in advance of the progress of the science of humidification as applied to textile manufacture.

The recognized necessity of adequate humidity, involving abnormal distribution of moisture automatically controlled to exact requirements, found our

## HIGH DUTY FAN TYPE MOTOR DRIVEN HUMIDIFIER

with automatic control requisite for the most exacting demands, proved and perfected by years of service and experience.

## OUR AUTOMATIC HUMIDITY CONTROL

is independent of electrical or complicated mechanism. It is designed and constructed for Practical Mill Usage; requires no Skilled Attendance, and is Efficient and Reliable.

The volume of orders received since January 1st far surpasses all our previous records, a majority being repeat orders from those who know the satisfactory performance of our equipment.

While we are booking large contracts for the High Duty type, we install other systems, basing our recommendations on the requirements of the work and results desired.

Our Equipments are Standardized and Guaranteed for Reliability and Efficiency.

## THE CHOICE OF A HUMIDIFYING SYSTEM

**must be one that for simplicity with great capacity and economy in maintenance produces uniformly such conditions that may be determined for the different requirements of the work. In the American Moistening Company's method of humidifying, all such requirements are GUARANTEED.**

**Our COMINS SECTIONAL HUMIDIFIERS**
**Our FAN TYPE and HIGH DUTY HUMIDIFIERS**
**Our VENTILATING Type of Humidifiers (Taking fresh air into the room from outside)**
**Our ATOMIZERS or COMPRESSED AIR SYSTEM**
**Our COMPRESSED AIR CLEANING SYSTEM**
**Our CONDITIONING ROOM EQUIPMENT**
**Our AUTOMATIC HUMIDITY CONTROL (Can be applied to systems already installed)**
**Our AUTOMATIC TEMPERATURE CONTROL**
**Are all STANDARDS of MODERN TEXTILE MILL EQUIPMENT**

# AMERICAN MOISTENING COMPANY

Boston, Mass, Atlanta, Ga.

**WILLIAM FIRTH, President** **FRANK B. COMINS, Vice-Pres. and Treas.**

**W. R. GRACE & CO.,** New York
**ANDERSON, MEYER & CO., LTD.** Shanghai, China
**W. J. WESTAWAY CO.** Hamilton, Canada

DAVID BRIDGE & CO.

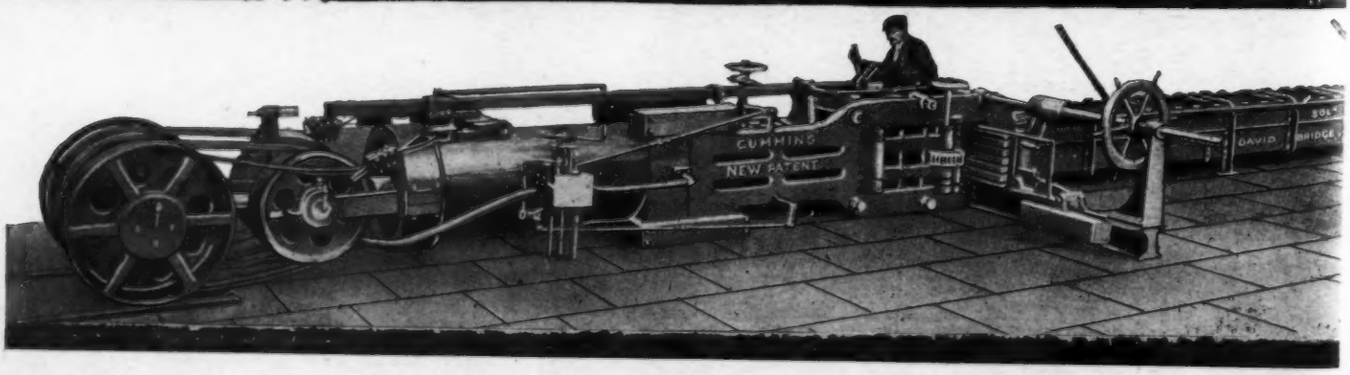
CUMMINS' HORIZONTAL HIGH BALING

# 70 Finished Bales Per Hour

The Cummins Press has an enormous capacity as compared with any American made press. Loose cotton can be thrown into it without any force whatever, and with small pumping power will produce HIGH DENSITY bales at the rate of about 70 per hour. Those bales are in one homogeneous piece and not in sections, therefore much superior sampling can be drawn.

Shippers will recognize and appreciate the rapid baling obtained from the New Patent Cummins Horizontal Hydraulic Press.

This Press has invaded the cotton fields of America, and is revolutionizing the method employed in baling cotton for both home and export consumption.



Ltd. MANCHESTER, Eng.

# DENSITY PRESS

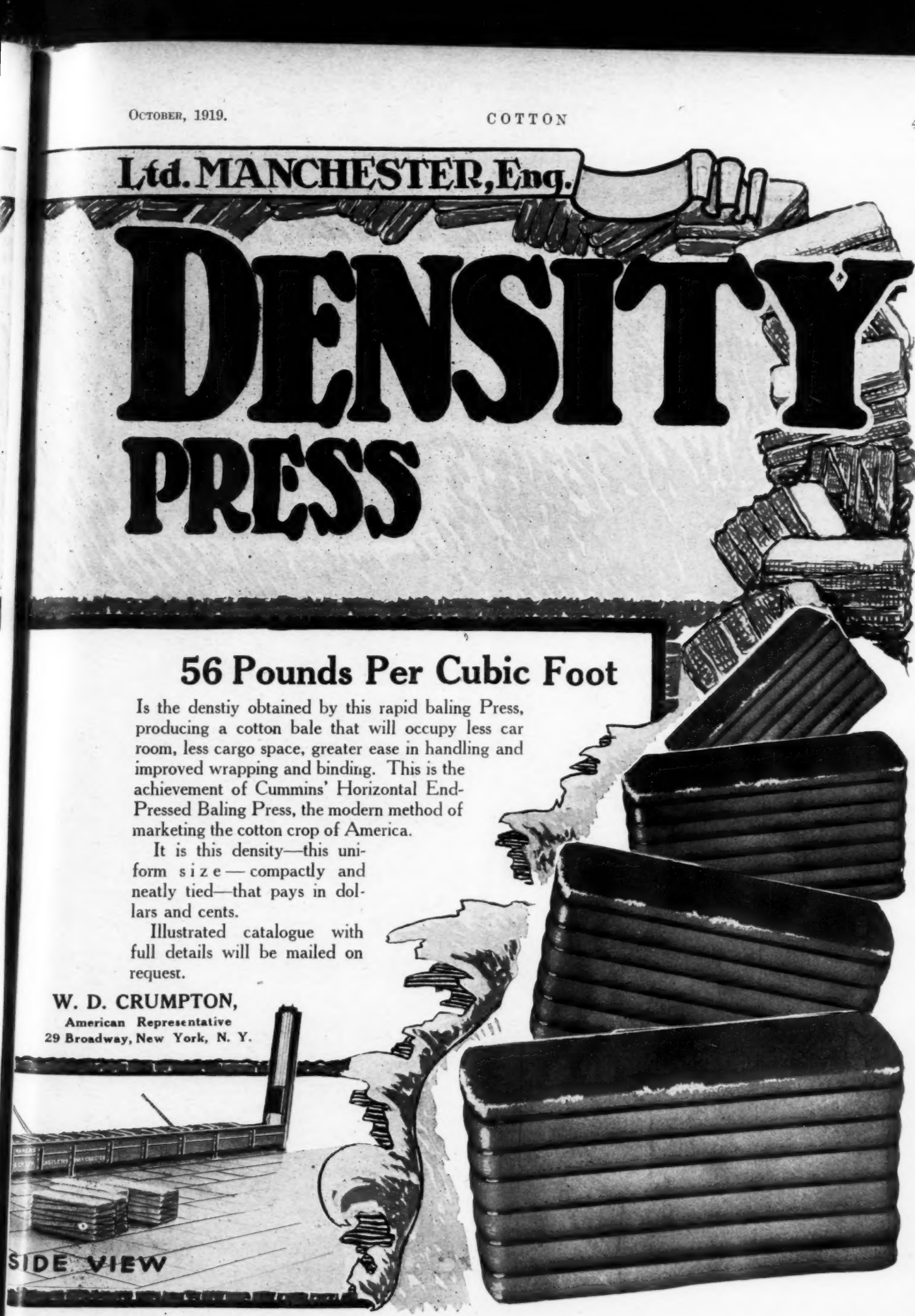
## 56 Pounds Per Cubic Foot

Is the denstiy obtained by this rapid baling Press, producing a cotton bale that will occupy less car room, less cargo space, greater ease in handling and improved wrapping and binding. This is the achievement of Cummins' Horizontal End-Pressed Baling Press, the modern method of marketing the cotton crop of America.

It is this density—this uniform size—compactly and neatly tied—that pays in dollars and cents.

Illustrated catalogue with full details will be mailed on request.

**W. D. CRUMPTON,**
American Representative
29 Broadway, New York, N. Y.



# Why Waste Good Machine-capacity?

**Already in your mills, and advertised in this World Conference number of "Cotton" are many improved machines with wonderful capacity—but will that capacity be fully utilized in the mills?**

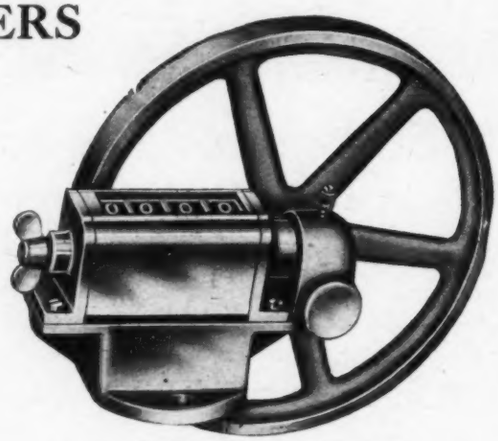
Production can't be all it might be until you count the product as your machines work, instead of after the work is finished. Make it possible to maintain a standard rate-of-work right through the day, and let the operatives *see* whenever they're running behind, by watching the records of

## Veeder COUNTERS

**Loom Pick Counter**

Records loom output in picks, in units of 100 or 1000, as ordered.

This counter is intended to be driven by the crankshaft; the instrument shown registers up to 1,000,000 picks, then repeats. Reads in plain figures. A similar model can be had in a **Hank Counter,** to record output of machines where the product is ejected by rollers.

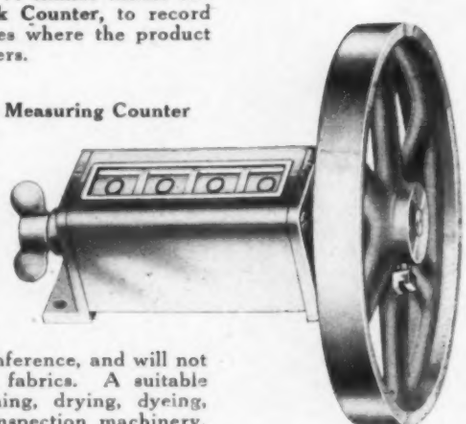


**Set-Back Yardage Counter.**

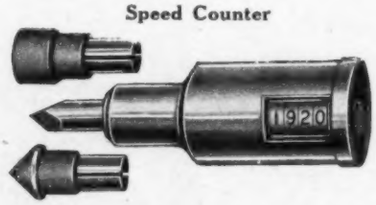
The above counter is designed for finishing and inspection machinery, much the same as the Lineal Measuring Counter described, only it measures in yards. The friction wheel is ½ yd. in circumference, but is geared to count in units of one yard. Reads in plain figures.

**Set-Back Lineal Measuring Counter**

This counter records the product in feet, and measures very accurately the length of cloth passing under the wheel. The straight-face friction wheel is One foot in circumference, and will not slip on the finest fabrics. A suitable counter for finishing, drying, dyeing, calendering and inspection machinery. For particulars and prices, refer to the Veeder *Textile Counter booklet.*

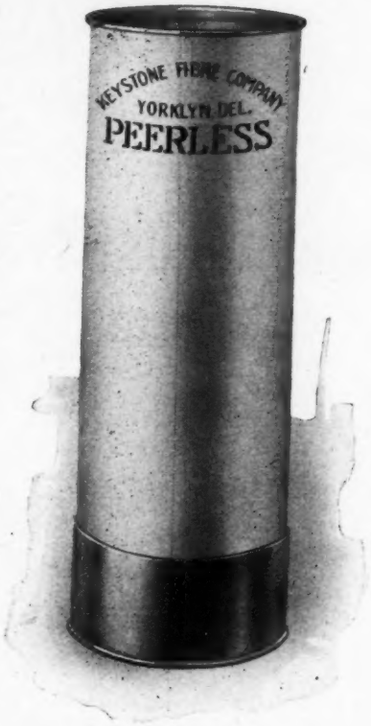


**Speed Counter**




The handiest instrument for counting the revolutions-per-minute of Mules, Ring Frames, Throttles and Roving Spindles, etc. Push-clutch starts or stops recording mechanism instantly, giving accurate readings without a stop-watch. Price, $3.50. See the Veeder booklet for complete description.

## The Veeder Mfg. Co., 6 Sargeant Street, HARTFORD CONN.




# QUALITY

Quality shows in its splendid appearance.

In its many years of hard service.

In its lightness and greater strength.

We make the fibre for Keystone "Peerless" Seamless Roving Cans.

Make it lighter, yet stronger and longer lived than many other fibres twice as heavy.

## KEYSTONE "PEERLESS" SEAMLESS ROVING CANS

Have been made right from start to finish.

Their quality is uniform throughout.

And every roving can we put out measures up to this high standard.

Order them through your mill supply house.

***The complete line of Keystone Holloware is shown in our booklet. Send for one.***

**Keystone Fibre Company**

Box 47 **Yorklyn, Delaware**

# You are NOT Using
# Lane Canvas Baskets and Trucks?

FIG.20.

Then it must be you have never stopped long enough to ask yourself why.

FIG.27

Consider for a moment their advantages as applicable to your various departments.

In the first place, their long wear removes them from the First-Cost Class and places them on a Cost-Per-Year basis. Then you come to the light weight and easy handling qualities. The help appreciates this, and also the absence of nails and splinters which tear hands and clothing. Their perfectly smooth interior reduces waste, too, especially in the fine goods mill.

All Lane Trucks are equipped with our improved casters with guards which prevent waste yarn, etc., from clogging. This saves the trucks, the floors and the help.

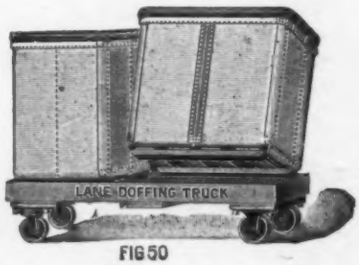


FIG 50

*Write for Catalog No. 65*

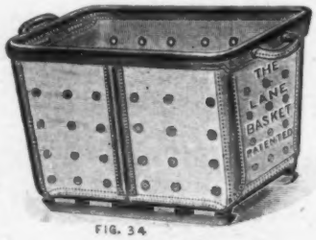


FIG. 34

## W. T. Lane & Brother, Mfrs.

**Poughkeepsie, N. Y.**

# 46 Years' Success

1873 1918

Spinning Rings Twister Rings
Silk Rings Traveller Cleaners
Traveller Cups GuideWireSets

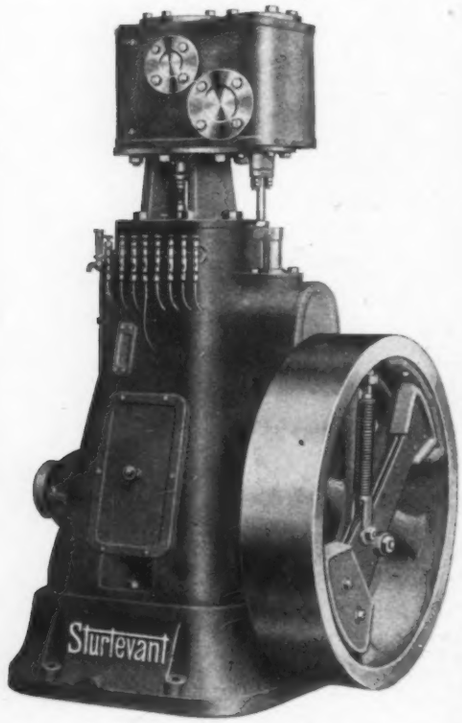
*The Best That Experience Can Produce-That Money Can Buy*

**Whitinsville Spinning Ring Co.**
**Whitinsville, Mass.**

# BLANKETS TH

## Sturtevant Apparatus - Sturtevant Engi

(REG. U.S. PAT. OFF.)



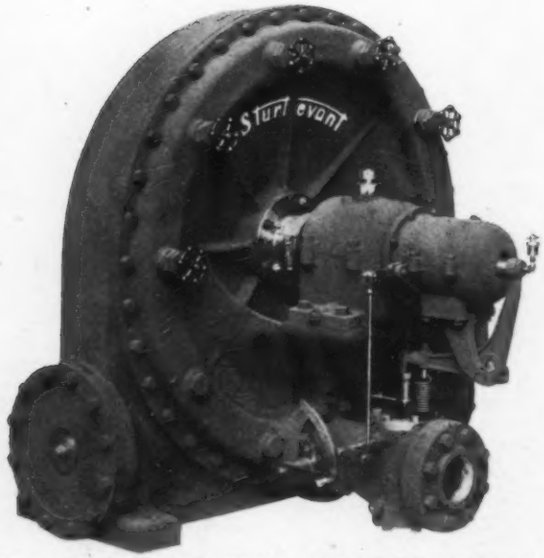

VS-7 Steam Engine showing sight oil feeders of gravity oiling system

## Steam Engines

Designed to U. S. Navy specifications, the most exacting in the world. Unexcelled in reliability. Give stellar service under all conditions. Good steam economy and close speed regulation. Built either with gravity or with forced feed lubrication, as conditions require. Used for direct connection to blowers, fans, generators and for independent power service, automatic or throttling. Every engineer will be interested in the many distinct features of their design. Write for catalogue No. 239.

## Steam Turbines

Particularly adapted to driving Sturtevant Fans and Blowers, pumps, generators and other auxiliaries with the minimum in steam consumption, attention and repairs. Built with solid rotors with individually controlled nozzles having internal reverse buckets to insure the most efficient absorption of the steam velocity. Unsurpassed in close speed regulation and in protection against over-speed. Ask for our new catalogue No. 256.




Type 6 Sturtevant Steam Turbine (Unretouched photograph)

## Generating Sets

Whether steam turbine, steam engine or gasoline engine driven, Sturtevant electric generating sets comprise every qualification to render the maximum of efficient service. Unsurpassed in operating economy by any units in their class. Write for bulletins.

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**the high quality of the product is assu**
**in design and construction of Fans, Bl**
**power apparatus that has been the out**

**To assist prospective purchasers**
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**engineers is ready to serve you promp**
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**Forced Draft Apparatus**
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98-Mechanical Draft, Treatise

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150-Sturtevant Fuel Economizers

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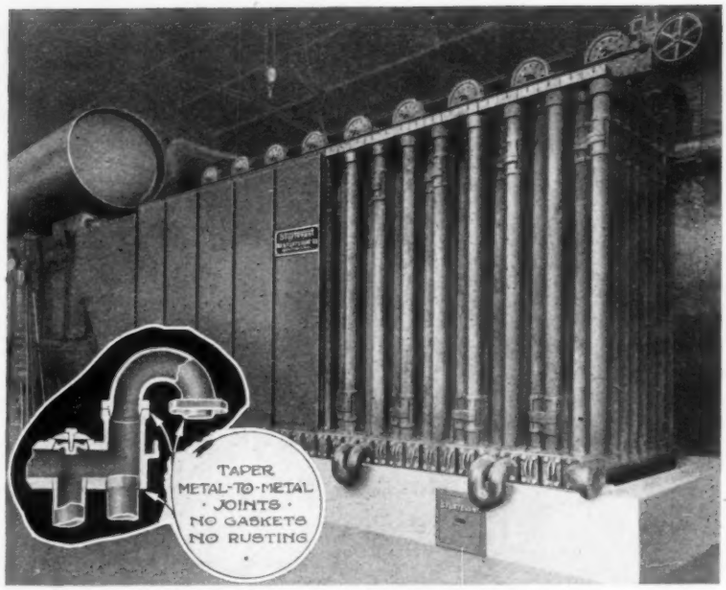


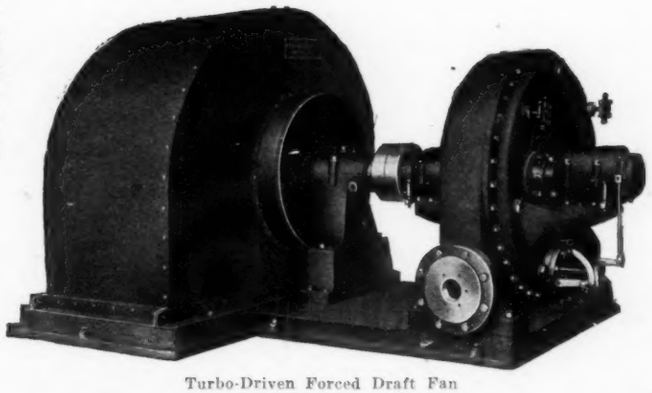

Sturtevant Economizer installation. The metal-to-metal joints eliminate all use of gaskets, packing and rusting; staggard pipe construction insures high feedwater temperature.

# Fuel Economizers

At a lower operating and repair cost the highest feed water temperature is assured. Large fuel savings effected. Boiler life prolonged—capacity increased. Smoke nuisance relieved. Two supreme Sturtevant features are the staggard pipe construction and the tapered metal to metal joints (see the illustration) which eliminates use of all gaskets, packing and rusting. Withstand 300 lb. pressure. Request catalogue No. 150.

# Mechanical Draft

The Supremacy of Sturtevant induced and forced mechanical draft apparatus-engine, turbine or belt driven—embrace the refinement and perfection derived from 60 years of "knowing how" in the construction, as world leaders, of fans, fan systems, and related products.



Turbo-Driven Forced Draft Fan

Y AVAILABLE

# Spinning Tape Specialists

WE specialize in tapes for spinning and twister frames.

Our ideas on your requirements have been drawn from exhaustive experiments, and our knowledge is that of an expert.

We also have a special spinning tape thread for sewing our tapes.

We have also perfected a belt for driving Universal winders. This is a special constructed fabric, and has proven very successful wherever it has been used.

We should be glad to send samples and quote prices upon request.

## Barber Manufacturing Company

**LOWELL, MASS.**

# Leatheroid
## MILL RECEPTACLES

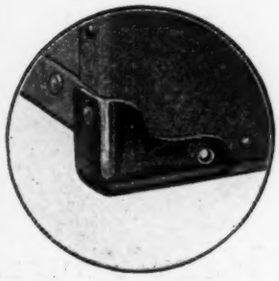
No. 1 Roving Can, Rolled Over Top Very Smooth

**This page is shown for the special attention of all Delegates and Guests to the**

**World Cotton Conference at New Orleans, La.**

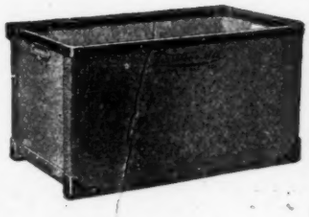
The illustrations picture the constructive features of the Leatheroid line.

**Sold by All Leading Mill Supply Houses**



**LEATHEROID BOXES**

are made with steel over wood top rims and all bottom corners have steel protecting irons — which also protect the shoes.

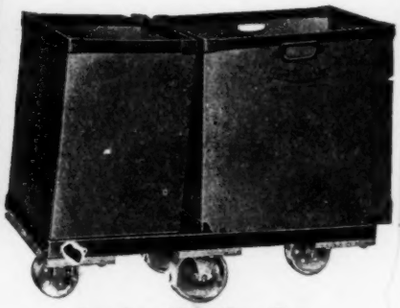


No. 2 Roving Can, Polished Steel Rim —Smooth

ORDER BY THE NAME

All Leatheroid cars are equipped with our own self-oiling wheels

Leatheroid No. 2 Steel-Clad Car. Nothing Equals it for Construction, Finish and Serviceability.



Leatheroid Doffing Car Showing Leatheroid Box Construction and Strong Platform.

Leatheroid No. 3 All Fibre Car. Solidly Built. All wearing surface protected.

ROGERS FIBRE COMPANY

*Leatheroid Sales Division*

1024 Filbert St., PHILADELPHIA, PA.

# ACME

# BALE TIES and BUCKLES

BETTER, neater and more firmly strapped bales is no longer considered from the standpoint of necessity, but has become a matter of pride with the better mills.

ACME Cold Rolled Bale Ties used with Acme Bale Buckles or Acme Seals, make better bales and are used by scores of the best mills in the country.

We also manufacture steel and wire box strapping and steel floor matting.

Write today for complete catalog.

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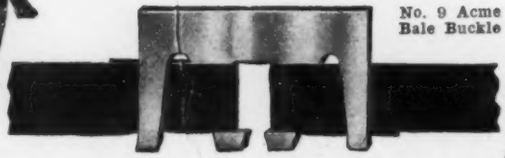
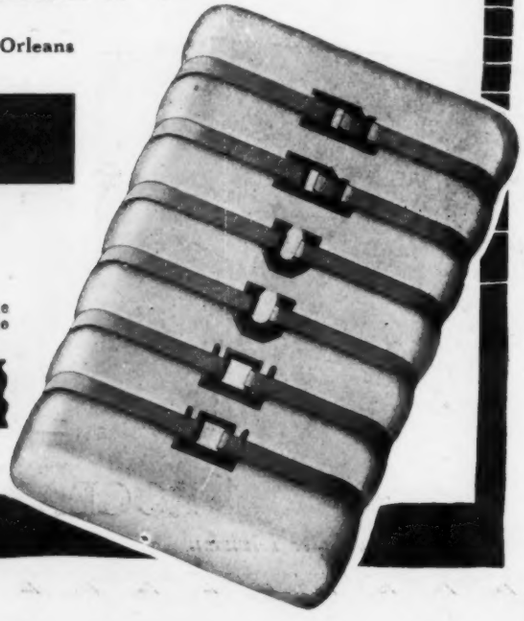
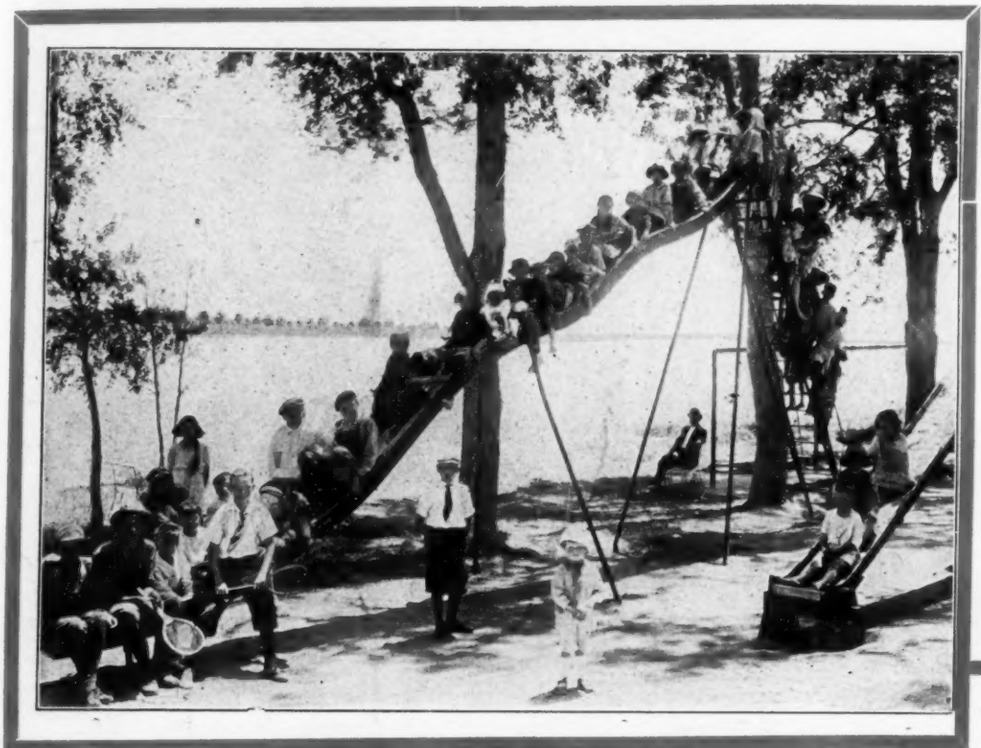


No. 9 Acme Bale Buckle



# OVER 200
## Cotton Mills are Using-

THE FUN FUL LINE
PLAYGROUND EQUIPMENT
FUN FUL



## An Investment that Solves Labor Problems and Increases Production

The question of efficient labor is of vital importance to every textile mill man.

The laboring man of the future is going to be influenced by the advantages offered him and his family by the mill—advantages that attract him and bind h'm to the job.

Such advantages are no longer considered or classified within the narrow limits of "Welfare Work" but are considered by the far-sighted executive as an absolute necessity that will prove a paying investment.

It requires no stretch of imag'nation to picture the contentment and loyal feeling of employees that are provided with outdoor gymnasia and athletic goods, and nurseries and playgrounds for their families. The workers are healthier in mind and body through the use of such apparatus and they always have something to look forward to at the end of their day's arduous labor. Playgrounds for the children uplift the standard of health throughout the entire village, increasing the ab.lity of the larger operatives to work more efficiently and contentedly.

In short, there is a reaction throughout your entire family of operatives—a reaction mentally, morally and physically that cannot help but increase individual productiveness and be profitable in dollars and cents to the mill.

FUN-FUL Playground Apparatus is already installed in over two hundred of the largest mills in the country who are finding that it's a paying investment—finding that FUN-FUL Apparatus is made to stand the use and abuse of the roughest operatives. The line includes Swings, Slides, See-Saws, Ocean Waves, Giant Strides, Outdoor Gymnasia, Athlet'c Goods of all kinds, etc.

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## HILL-STANDARD CO.

### *Important!*

### *Income Tax Exemption.*

Owing to the fact that the policy of the United States Government is to encourage recreation and general welfare work among industrial employes and their families, manufacturers and other employers are authorized to deduct expenditures for such purposes from their Income Tax Returns.

Here is a fine opportunity to equip your recreation grounds practically without expense to you.

**GENERAL SALES OFFICES, CONWAY BUILDING, CHICAGO**

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# STANDARD

## MILL RECEPTACLES

Long life in spite of rough usage is one reason for the complete satisfaction which all mills obtain from STANDARD Fibre Receptacles. Especially is this true of the

## "NO-WASTE" SEAMLESS ROVING CAN

The NO-WASTE Seamless Roving Can is of smooth, glazed inside finish without seams or rivets, which prevents all waste.

They are made in all diameters, fibre and metal tops.

All STANDARD Mill Receptacles are made of the most superior grade of fibre, fully protected and reinforced at every exposed corner.

Our catalog describes the full line of Roving Cans, Round Taper Baskets, Doffing Trucks, Boxes, Barrels, etc. Sizes and styles to meet your every requirement. You can't go wrong when you select STANDARD Receptacles.

We will be pleased at any time to assist you in any special problem relating to fibre mill receptacles.

WRITE TODAY FOR CATALOG.

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# TOLEDO

JUST as the Toledo—No Springs—Honest Weight Computing Scales displaced the old-fashioned even-balance and beam scales and revolutionized weighing in the retail stores—

So also Toledo, Springless, Automatic Scales are displacing the cumbersome, old-fashioned steelyard and are revolutionizing weighing in the cotton industry.

Toledo Scales require no hand operations. They indicate the weight instantly, automatically, plainly and with absolute accuracy.

Years of experience in building automatic scales exclusively have enabled our staff of engineers to perfect especially adapted, automatic, springless Toledo equipment to weigh cotton in whatever form it is to be found, from the bags of cotton in the field to the finished product as it leaves the mill by freight, express or Parcel Post.

At every stage of manufacture or distribution where weight is to be determined Toledo Scales save time, reduce costs and eliminate the loss due to faulty weighing methods.

Write today and let the Toledo Scale man in your neighborhood help solve **your** weighing problems, whatever they may be.

## Toledo Scale Company

Toledo, Ohio

Branch Offices and Service Stations in All Large Cities

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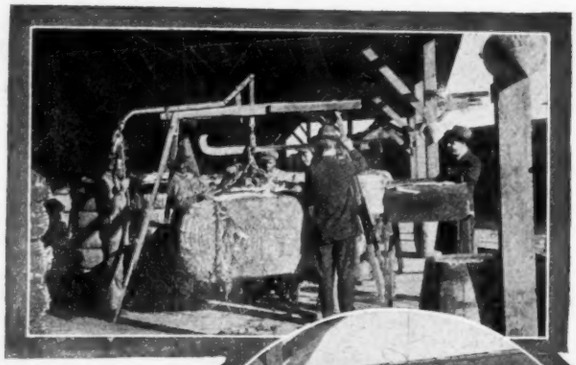
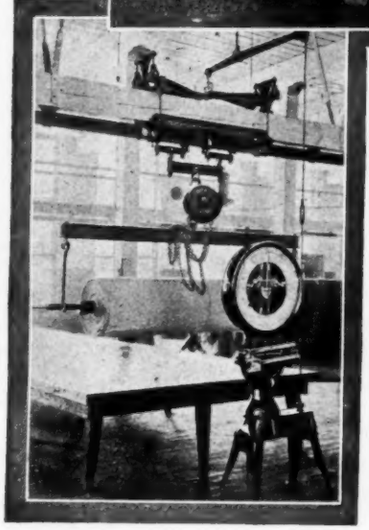
# SCALES



Old Method Required Many Pairs of Hands

Toledo Automatic Method now in use in North Texas Compress Gainesville Texas

Toledo Cotton Lap Scale Serves Several Machines



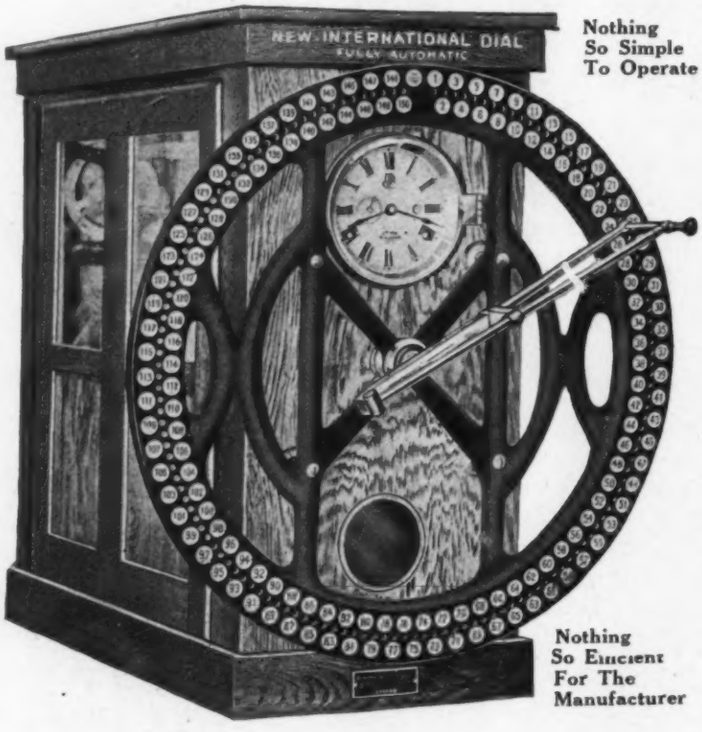
Toledo Overhead Track Scale in Cabarrus Cotton Mill Kannapolis N. C.

# Eliminate Guesswork

Stop the haphazard irregular working hours of your employees and you will automatically boost your production without increasing your overhead. The bonus system for full time is a wonderful booster—but

## ARE YOU GETTING FULL TIME?

### Or Are You Paying for Guesswork and Errors




Nothing So Simple To Operate

Nothing So Efficient For The Manufacturer

| Employee No. | Morning In | Lunch Out | Lunch In | Night Out | Extra In | Extra Out |
|---|---|---|---|---|---|---|
| 1 | 648 | 1201 | 1256 | 502 | | |
| 2 | 647 | 1201 | 1257 | 502 | | |
| 3 | 705 | 1201 | 1253 | 502 | | |
| 4 | 649 | 1202 | 1253 | 504 | | |
| 5 | 650 | 1103 | 1254 | 504 | | |
| 6 | 650 | 1202 | 1256 | 504 | | |
| 7 | 1256 | 504 | | | | |
| 8 | 651 | 1202 | | | | |
| 9 | 650 | 1202 | 1258 | 505 | | |
| 10 | 651 | 1201 | 106 | 505 | 533 | 836 |
| 11 | 651 | 1201 | 1258 | 505 | | |
| 12 | 650 | 1201 | 1258 | 504 | | |
| 13 | 1256 | 504 | | | | |
| 14 | 655 | 1201 | 1255 | 502 | | |
| 15 | 651 | 1201 | 1255 | 502 | | |
| 16 | 651 | 1204 | 1256 | 502 | | |
| 17 | 807 | 1204 | 1257 | 502 | | |
| 18 | 652 | 1204 | 1258 | 502 | | |
| 19 | 648 | 1204 | 1258 | 502 | | |
| 20 | 646 | 1204 | 1257 | 403 | | |
| 21 | 658 | 1204 | 1257 | 504 | 533 | 836 |
| 22 | 657 | 1204 | 1259 | 504 | | |
| 23 | 753 | 1204 | 1259 | | | |

Late "ins," early "outs" and overtime, indicated here by enclosed figures, are automatically printed by the machine in red.

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**Signode Equipment**

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Signode System
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and the most
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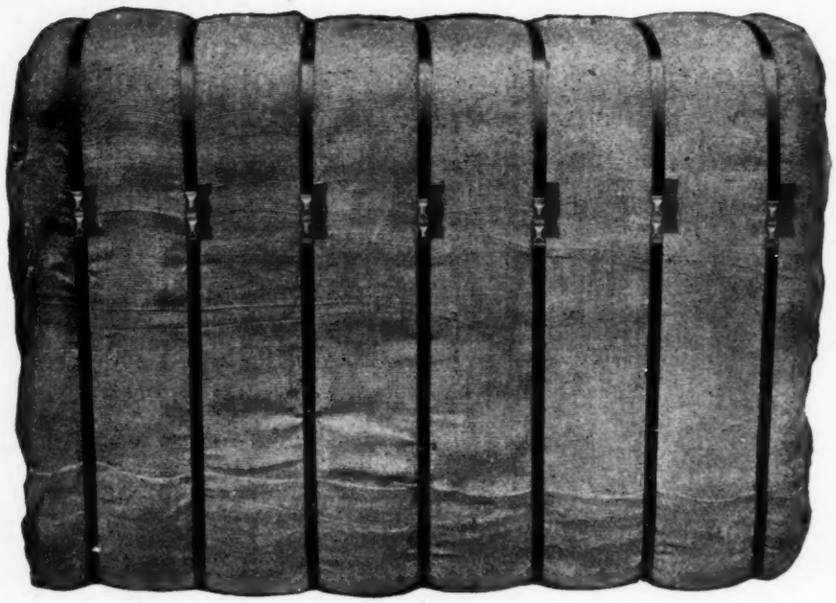

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Sole Manufacturers and Distributors.

ALVIN LOVINGOOD, Southern Manager

ATLANTA, GA.

Chicago, Ill. Philadelphia, Pa. Boston, Mass. New York City

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Registered in the U. S. and Foreign Countries

## The Dictaphone on Any Kind of Letters Proves Its Case in 15 Minutes

King Cotton is in such demand this fall that every manufacturer of that staple faces a formidable pile of mail every day. The Dictaphone is the best way to handle the letters. A 15-minute demonstration will prove it to you in your office, on your work.

Make an appointment today. Branches in all principal cities—see your telephone book.

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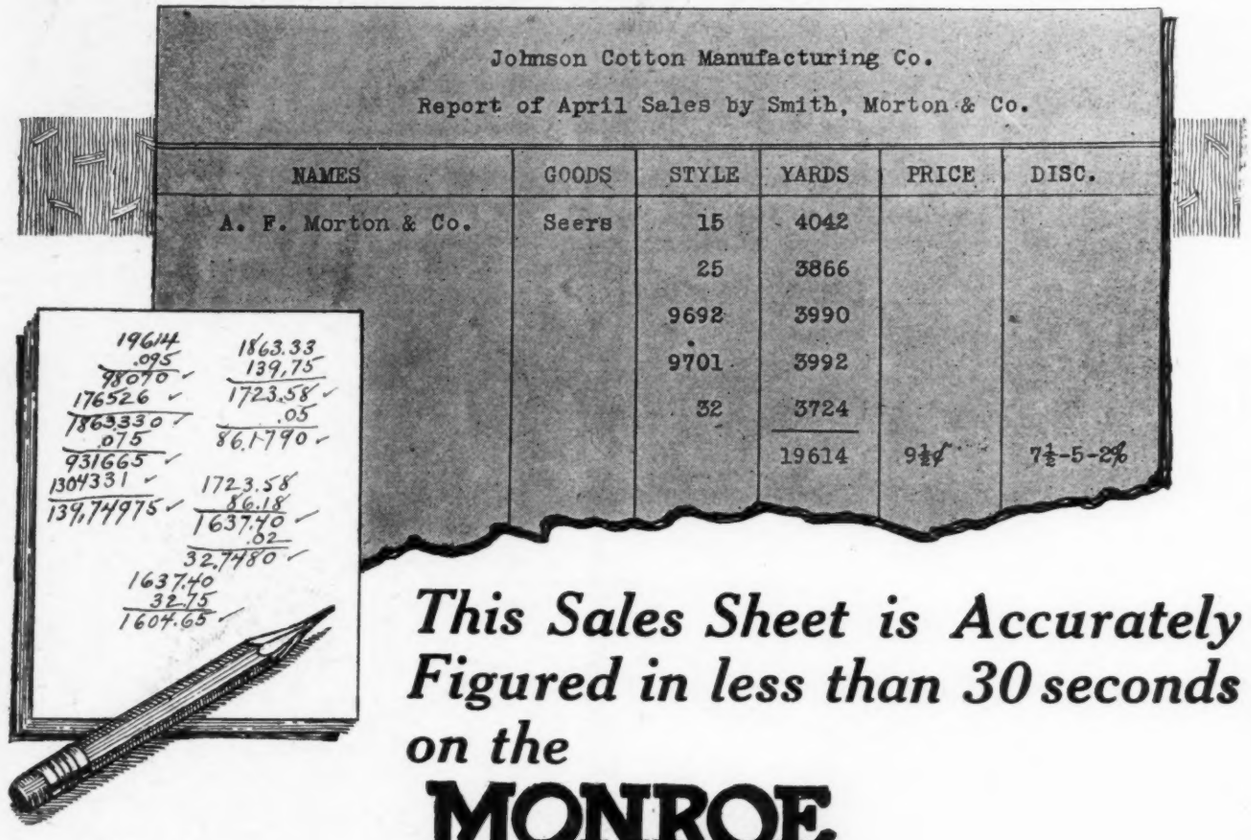
*Write for Booklet, "The Man at the Desk"*

There is but one Dictaphone, trade-marked "The Dictaphone," made and merchandised by the Columbia Graphophone Company.

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LESS than 30 seconds to get the correct answer! Compare this to the pad and pencil method! Multiply it by the number of sales sheets you figure weekly—monthly—yearly! That will give you a fair idea of what your mind must go through if you rely on pad and pencil methods.

But more important than its speed is the absolute accuracy of the answers obtained on the **MONROE**. The **MONROE** Visible Check of Accuracy puts an absolute ban on operating mistakes — proving your figures at every step.

Your weave room can profitably use the **MONROE** as well as your Accounting Department, to figure Warp Calculations, Filing, Stock, Material, Shrinkage, etc. The **MONROE** reduces every mathematical calculation—even to complicated engineering formulae involving square and cube root—to an accurate machine-operated process that eliminates the human tendency for error and figures the answer in a fraction of the time it takes by any other method.

**The "SHOW ME" Coupon**
**Mail it Today**

**To Monroe Calculating Machine Company**
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☐ Send the **Monroe Book of Facts** and information how your machine will save time on our figure work.

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Cotton 10-19

**Many of the leading Textile concerns first learned of the MONROE through sending a coupon like the one below. It's there for your convenience—why not use it?**

## Monroe Calculatin Machine Co.

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***Offices in Principal Cities***

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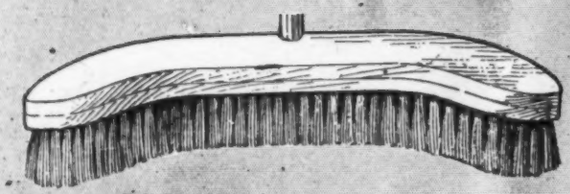

Felton of Manchester

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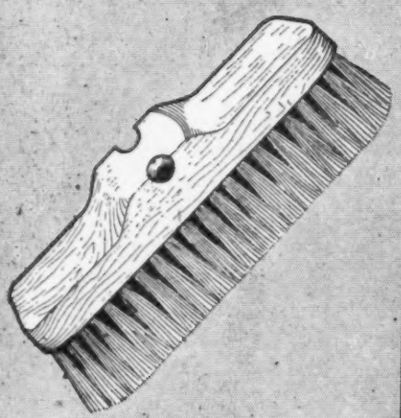

IT takes a good brush to stand the use and abuse of long and severe service, and mill men recognize the superior quality of

**FELTON BRUSHES**

They are made from the best material and by expert workmen.

There is a brush for every use at the lowest price consistent with the high standard of quality.

Departments are maintained for the repairing and refilling of worn out brushes at Manchester, New Hampshire, and Atlanta, Georgia.

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Atlanta, Ga.

Felton of Atlanta

FELCO

# BRUSHES

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POWER SERVICE MOTOR TRUCK DEPENDABILITY

A THREE - FOLD VALUE

THE TRIANGLE TRUCK is of Three-Fold Value in the Cotton industry because it is:

**Powerful.** Ample pulling, and great carrying capacity, giving it a very wide range of usefulness.

**Serviceable.** Built to endure. Handles almost as easily as a touring car.

**Dependable.** The component parts of the TRIANGLE are all of **Proven Worth.**

**Built in ¾-, 1½-, 2½-, and 2-Ton Special Sizes. Write for Complete Description.**

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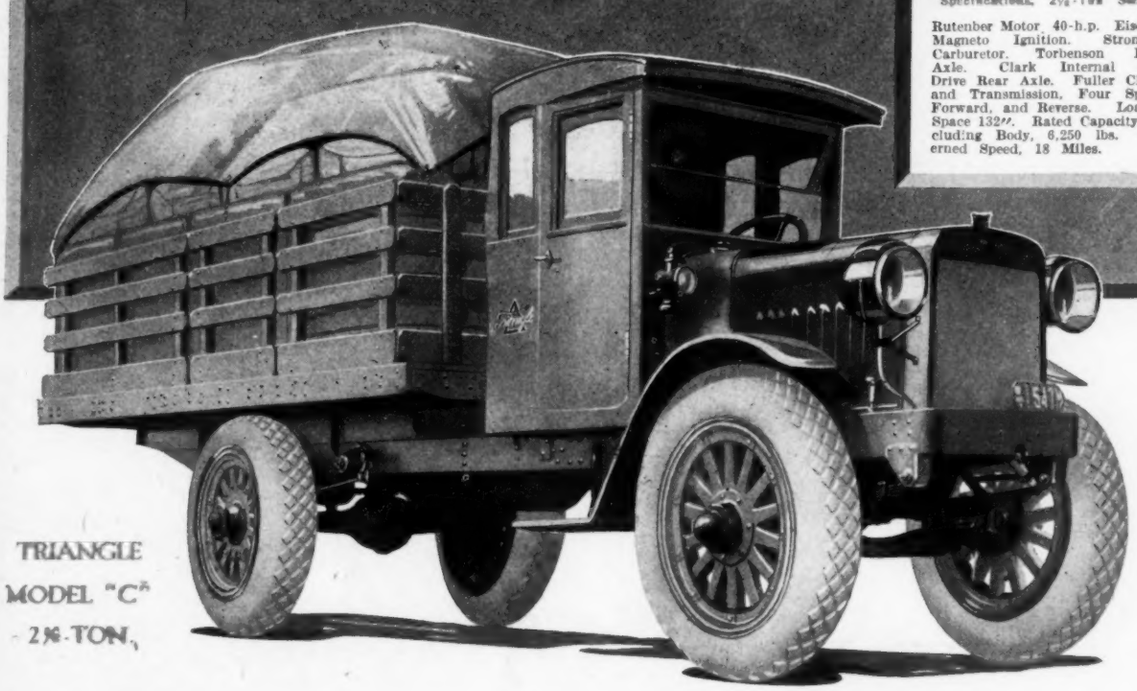
Boston, Mass.

**Specifications. 2½-Ton Size.**

Rutenber Motor 40-h.p. Eiseman Magneto Ignition. Stromberg Carburetor. Torbenson Front Axle. Clark Internal Gear Drive Rear Axle. Fuller Clutch and Transmission, Four Speeds Forward, and Reverse. Loading Space 132". Rated Capacity, including Body, 6,250 lbs. Governed Speed, 18 Miles.



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# Announcement !

THE Greenville Textile Supply Company, Greenville, S. C. is now ready for business.

With a modern three-story building—27,000 sq. ft. of floor space—both freight stations at our door—our own private siding—a big stock of Textile Supplies made by manufacturers you know to be the best—sufficient capital to handle any proposition in our line—a manager who has demonstrated his ability—a well-posted and able corps of salesmen—we feel no hesitancy in asking a share of your business.

We are entering the field knowing that we must serve you well to merit your business and that is our aim. The manufacturers have received us well, putting us on preferred jobbers' base—which enables us to meet all competition.

By giving a Service and Quality that is pleasing to you we hope to merit your patronage.

**Greenville Textile Supply Company**

Greenville, -:- South Carolina

# F. H. THOMAS COMPANY, BOSTON, MASS.

A First Aid Room or an Emergency Hospital for your employees will:

Decrease your liability for industrial accidents.

Decrease time lost through temporary incapacity of your workers.

Decrease needless suffering from minor injuries and prevent minor injuries from developing into serious cases.

Increase morale and loyalty among your employees and give you opportunity to show your interest in the welfare of your workers.

The F. H. Thomas Company has equipped First Aid Rooms for over four hundred factories and mills who have appreciated these facts.

A modern Thomas equipped emergency room will put you also among the progressive owners who are saving money and advancing the conditions of their workers.

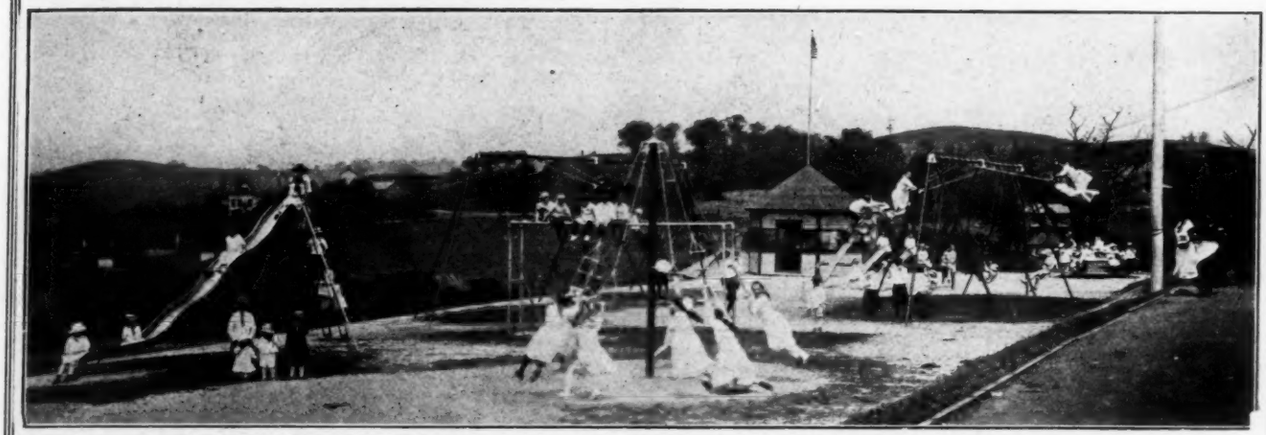
Write for information and advice stating, if possible, the number and nature of your accidents.

A new catalogue will be ready the middle of October.

## F. H. THOMAS COMPANY

**689-691 Boylston St. BOSTON, MASS.**

# REDUCE YOUR LABOR TURNOVER

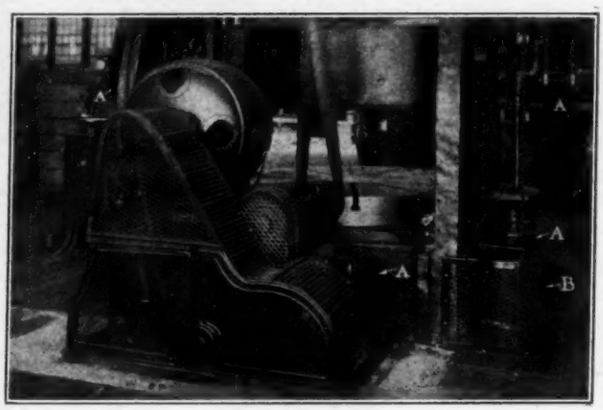


This Playground, in a mill village, has resulted in a REDUCTION OF 25% of labor turnover the FIRST YEAR. It means a common community interest, healthy children, contented mothers and *PERMANENT* EMPLOYEES.

This is not charity or philanthropy; it is A HARD HEADED BUSINESS PROPOSITION, adopted as a profit maker by the leading progressive industries. CAN YOU AFFORD TO BE WITHOUT ONE?

If you are interested in this proposition, you will be more so upon receipt of our catalogue, blueprint showing practical layouts, and full information, which we want to send you.

## INSTALL GUARDS—PREVENT ACCIDENTS---SAVE COMPENSATION



Our organization of experienced, expert builders of SAFE GUARDS will construct and erect at YOUR plant, under YOUR supervision, Guards of dependability, of endurance and safety for your machines; or we will build at our factory Guards in accordance with blue prints or drawings submitted.

Let us send our engineer to estimate on your requirements.

Our catalogue is most complete, listing materials for Safety First Aid and Welfare and is yours for the asking.

**The World's Largest Builders of Safe Guards For Machinery**

**Manufacturers of**

**Porcelain Enamel Safety, Danger and Warning Signs, Hospital Equipment, First Aid Materials, Goggles, Bulletin Boards, etc.**

SAFETY FIRST SUPPLY COMPANY PITTSBURGH, PENNSYLVANIA — SAFETY FIRST

## SAFETY FIRST SUPPLY COMPANY

**Pittsburgh, Pa.**

**Branches:**

**Philadelphia** **Cincinnati** **Huntington**

# GRAND CENTRAL PALACE
## NEW YORK

OPERATED BY THE

## Merchants and Manufacturers Exchange of New York

This is the largest exposition building in the world, occupying an entire city block right in the heart of New York. It is convenient to all railroads, steamship piers, hotels, theatres and shopping districts.

America's greatest industrial expositions are held annually in this building.

# We'll Tell The World

about

# COTTON

Cotton Growers:
Cotton Spinners:
Cotton Associations:

Manufacturers of Cotton Products:
Seed Oil Manufacturers:
Cotton Handlers:

Cotton Exchanges:
Warehouse Men:
Textile Producers:

Dear Sirs:

Nature's most useful product, cotton, should be shown and explained to the world, so that its true value can become as well and commonly known as are its every day uses. The entire human race uses cotton but the growing of this staple and its thousands of applications is not as well known as this wonderful product of the South deserves. And there are thousands of other uses to which it can still be put. Develop the new applications—develop the cotton business in sections where cotton has never been exploited—increase your exports—cover every angle of the cotton industry for every nation—in the concentrated market of the world in the metropolis of America

BY

**A PERMANENT NATIONAL COTTON**

**and Allied Trades**

**EXPOSITION**

**At the World's Trading Center**

**GRAND CENTRAL PALACE**

**NEW YORK**

(The Home of International Industrial Expositions)

All roads lead to Grand Central Palace, all international steamship piers and steamboat docks are in contact with Grand Central Palace and buyers from all over America and all over the world and the great mass of the interested public are constantly thronging Grand Central Palace, visiting the Weekly and Bi-Weekly Trade Shows and the Permanent International Industrial Expositions.

Cotton Growers:

Your audience is ready for you.

For further particulars address

## The Merchants & Manufacturers Exchange

**Grand Central Palace** **New York**

# Keeping Floors 100% Clean

**Set No. 5 Complete—** Suitable for mills having 40,000 to 75,000 spindles or 12,000 square feet of floor space or more. Other sets and other sizes for smaller mills.

The necessity for clean floors is recognized in many textile mills today. In the mill pictured above, the necessity is more than recognized. It is met.

There the floors are as clean as new—100% clean. The effect on production is a revelation. It proves that cleanliness increases the efficiency of employes and machines, and reduces waste and spoilage.

The Finnell System of Power Scrubbing employed in this mill is adaptable to all mills. The machines comprising the equipment are in various sizes and combine into batteries of various capacities.

Our nearest representative will gladly explain the details if you will first write our headquarters. No obligation is attached to so doing.

**American Scrubbing Equipment Co.**

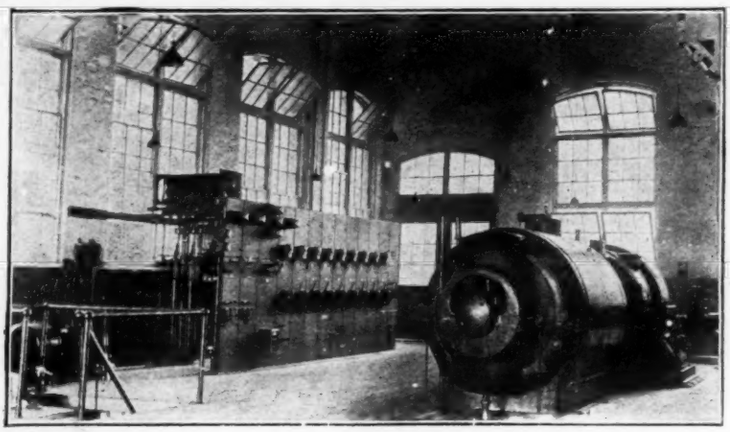
*Formerly Finola Mfg. Co.*

**General Offices: 180 N. Wabash Ave., Chicago. Factories: Hannibal, Mo.**

| | | | | | | |
|---|---|---|---|---|---|---|
| Atlanta | Buffalo | Denver | Los Angeles | Newark | Philadelphia | Salt Lake City |
| Baltimore | Chicago | Detroit | Louisville | New Orleans | Pittsburgh | San Francisco |
| Boston | Cincinnati | Indianapolis | Milwaukee | New York | Providence | Seattle |
| | Cleveland | Kansas City | Minneapolis | Omaha | St. Louis | |

# FINNELL SYSTEM

## OF POWER SCRUBBING



Power Plant of

MONARCH MILLS

Union, South Carolina

1500 KW Steam Turbo-Generator Set.

Efficient operation of small and moderate size plants results from applying the same principles of correct design and construction that are used in large installations.

S SERVICE

J · E · SIRRINE

ENGINEER

GREENVILLE · SOUTH · CAROLINA

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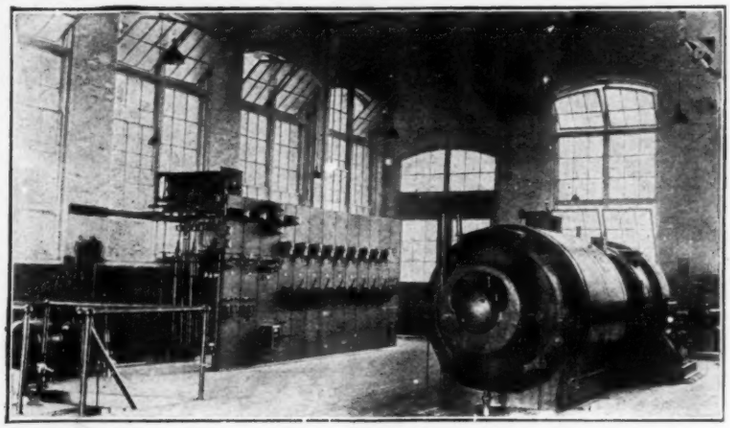
| Boston | Cincinnati | Indianapolis | Milwaukee | New York | Providence | Seattle |
| | Cleveland | Kansas City | Minneapolis | Omaha | St. Louis | |

# FINNELL SYSTEM

## OF POWER SCRUBBING



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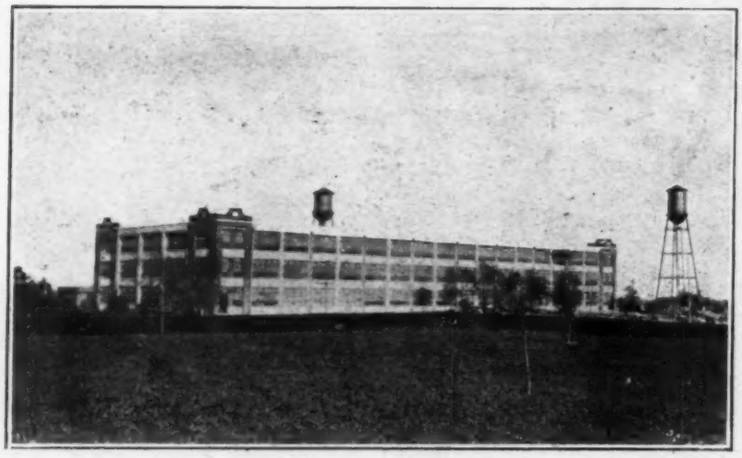
GREENVILLE · SOUTH · CAROLINA



REPUBLIC COTTON MILLS
GREAT FALLS,
SOUTH CAROLINA.

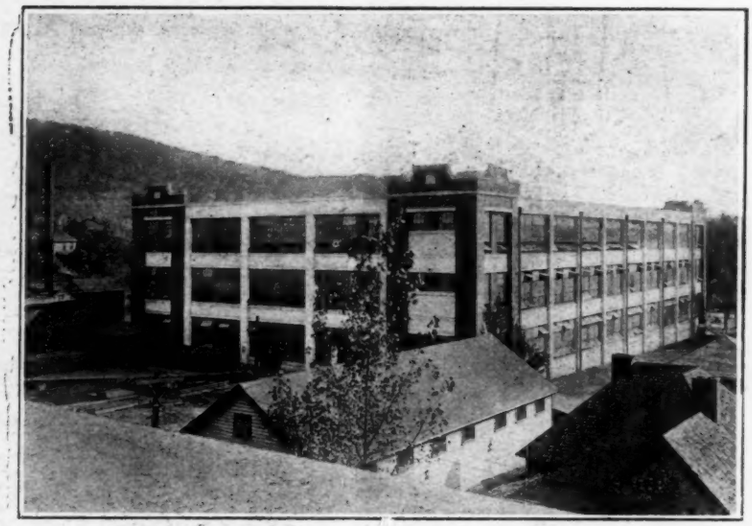
32640 Spindle, Print Cloth Mill.
Reinforced Concrete Construction.
Individual Electric Drive.
Indirect Artificial Lighting.

SERVICE

J · E · SIRRINE

*E N G I N E E R*

GREENVILLE · SOUTH · CAROLINA



THATCHER SPINNING COMPANY
CHATTANOOGA, TENNESSEE

21760 Ring Spindles.
Fine Hosiery Yarn Mill.
Reinforced Concrete Construction.
Individual Electric Drive.
Picker and Card Rooms on Third Floor.
Spinning Room on Second Floor.
Twister and Shipping Rooms on First Floor.

This mill was built in 1916 and the arrangement of departments based on experience gained from several similar mills, some of which were built ten years earlier.

S
SERVICE

**J · E · SIRRINE**

*ENGINEER*

**GREENVILLE · SOUTH · CAROLINA**

# The Village Beautiful

## Is Your Village In As Good Shape As Your Mill?

Nothing attracts intelligent operators so much to a mill as well-kept streets and comfortable, cheerful surroundings.

The picture at the top left shows a village street at the Judson Mills before improvements were made. The others indicate the character and permanence of our construction work.

**We install Waterworks, Sewage Systems, Curbing, Street Paving, Grading and Top Soil.**

*Estimates Gladly Submitted.*

**Slattery & Henry, Inc.**

**Mills Building, Greenville, S. C.**

L. P. SLATTERY
President & Treasurer

# *Engineering Thought Supplements The Textile Manufacturers Skill*

Mill Buildings are of 100 per cent value in production only when they are exactly suited to the work to be done and have the most efficient relation to the entire group.

This calls for the Engineer's practical thought and technical skill to supplement the Owner's intimate knowledge of his own business.

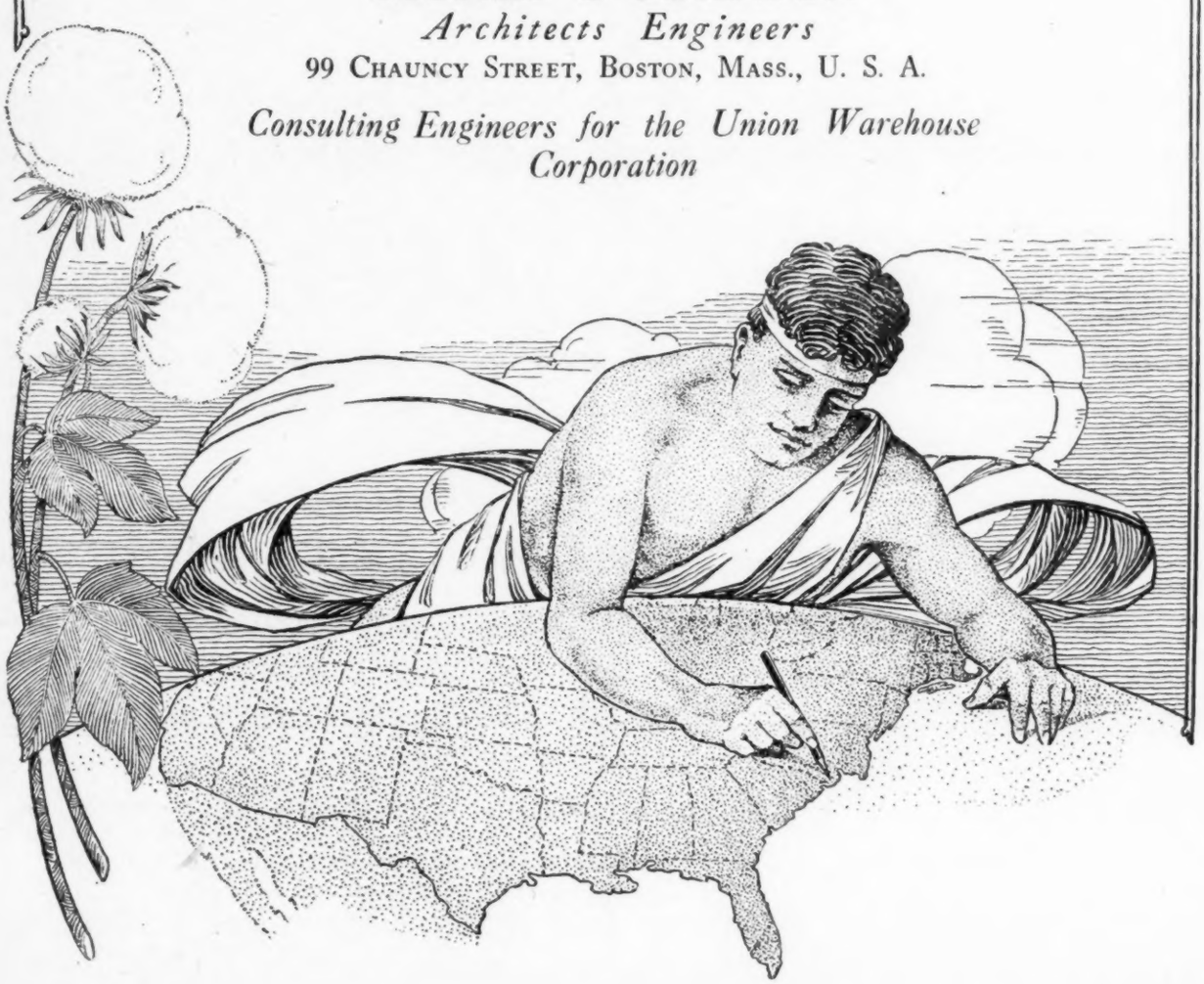
This organization of demonstrated ability includes every technical force necessary to the designing of mill buildings, complete manufacturing establishments, warehouse and waterfront developments, and the supervising of construction.

## MONKS & JOHNSON

*Architects Engineers*

99 Chauncy Street, Boston, Mass., U. S. A.

*Consulting Engineers for the Union Warehouse Corporation*



# A NEW ERA IMPLIES NEW FOR THEIR SOLUTION. SYMBOL OF PROGRESSIVE CONSTRUCTS FOR

25 PER CENT increase in productive efficiency per employee is to be the answer of a New England Cotton Mill—now building—to labor shortage and high wages in a period of unprecedented demand for textile products.

¶ For this, Lockwood, Greene & Company, who design textile mills so as to make every square foot of them effective in operation, drew the plans.

¶ The ABERTHAW CONSTRUCTION COMPANY, which has devoted a quarter century to devising means for ensuring that every square foot of building is worth what it costs and costs no more than its earning worth, is erecting the structure.

¶ Thus two great engineering firms, each an authority in its field, are co-operating to achieve in an industrial undertaking that kind of perfection which world need now makes important and world competition will shortly make imperative.

*To meet the convenience of Southern industrial interests* ABERTHAW *has opened an office under management of N. McL. Sage in the* PETERS BUILDING, ATLANTA.

*A post card to that address will bring the interesting illustrated booklet,* MODERN TYPES OF TEXTILE MILLS, *published by* ABERTHAW.

# PROBLEMS & NEW MEANS *"BUILT by ABERTHAW"* IS A INDUSTRIALISM THAT ACCOMPLISHMENT

CO-OPERATION such as this is characteristic of ABERTHAW building service. It places at the disposal of a client, or his engineers, a highly perfected organization whose sole function is to procure the type of building calculated best to meet the given requirement.

¶ Safeguarding the work of this organization is the codified and tabulated experience of years. Upon this is based the carefully studied schedule of procedure prepared for each new enterprise. It governs the checking of reports of construction costs which ABERTHAW accounting renders unfailingly every day.

¶ That ABERTHAW methods are not talking points but successful working principles is evidenced by an extensive industrial clientele whose confidence in the Company is expressed not only in successive repeat orders, but in those cordial recommendations out of which has grown a business of constantly increasing magnitude.

## ABERTHAW CONSTRUCTION COMPANY

*CONSTRUCTION MANAGERS*

BOSTON *(27 School Street)* MASSACHUSETTS

ATLANTA BUFFALO PHILADELPHIA

## "WHAT SHALL I DO?"

EVERY employer, every worker, is asking this question. You, who have always been considered the guardian, are being asked this question.

Man to man, now — honestly and without biasness — who should and must determine the industrial future? You allowed labor to think you considered it a commodity — that you thought and believed workers to be articles of commerce.

You allowed labor to think wrong of you — you never meant that human beings could or should be bartered. It is what we actually do that is really a commodity; but do not allow labor to continue thinking wrong about you.

*Just because employers neglected the thoughts of workers.* That's the reason for the present-day unrest.

Now, why not switch? Why not get back to earth? *Why not use old-time common sense?* Why not rub elbows and teach facts in the good old-fashioned way?

Through rubbing elbows, by word of mouth, through personal contact, we are invisibly opening the eyes and ears of employees throughout all kinds of industries and telling them the truth. We reach them, place the proper thought in the right place and at the right time.

The workers in the Shermanized Plant know which side of their bread the butter is on — they know that a good day's work will bring a good wage — they are made to think right, to act right, to co-operate. They know that their boss is on the square — they know what to do. They fully realize that it is what a worker does in work well done that brings about prosperity.

We'll tell you Who we are, What we do, and How we do it, either through the mail or by rubbing elbows with you.

Write our nearest office on your business letterhead for our literature, or, better still, tell us when we can have a conference

## SHERMAN SERVICE INC.

*"Industrial Relationship"*

| | | | |
|---|---|---|---|
| New York<br>2 Rector St. | Chicago<br>208 So. La Salle | Philadelphia<br>1211 Chestnut St. | Boston<br>10 State St. |
| St. Louis<br>314 No. Broadway | New Haven<br>42 Church St. | Providence<br>10 Weybosset St. | Toronto<br>10 Adelaide St. East |

SHERMAN SERVICE

# "MY BOSS IS ON THE SQUARE!"

THAT'S what they think. That's what they must continue to think. *More than 90% of workers are loyal employees.*

But you must not only have them *think it is so — it must be a FACT.*

**BE square with your workers, but make them realize that you are square.** Unless you do, production will constantly worry you — unless they know, *unless their viewpoint is right,* you and they will be losers.

If workers think right, they act right. There is one thing they must know:

**"It is work well done that determines earning power!"**

The very best of wages, working conditions, hours of labor, and everything else, will not maintain peak-production unless your working people *think right.* This has been proven to your complete satisfaction these past two or three years.

What are you going to do about it? What's coming next?

You want them to understand and the way must be found *to reach THEM — they must think and act right!.*

Orators start argument. The Press brings retaliation. You appear before them and are misunderstood — your intentions are questioned. Business policies may have to be changed, but don't be in a hurry — think!

The *old-time employer* rubbed elbows with his helpers — you can't, there's too much for you to do elsewhere. He was known by and knew every fellow around him. He kept them with him by word of mouth and personal contact. There was little trouble those days.

Think it over. Didn't he succeed because of personal contact and suggestion? His workers rubbed elbows with him and knew he was on the square — no radical started something; *no knocker* made headway in his shop.

## SHERMAN SERVICE INC.

*"Industrial Relationship"*

| New York | Chicago | Philadelphia | Boston |
|---|---|---|---|
| 2 Rector St. | 208 So. La Salle | 1211 Chestnut St. | 10 State St |
| **St. Louis** | **New Haven** | **Providence** | **Toronto** |
| 314 No. Broadway | 42 Church St. | 10 Weybosset St. | 10 Adelaide St. East |

SHERMAN SERVICE

# Cozy-Attractive-Economical Homes

for Industrial Villages

Manufactured in large quantities, after patented methods. Especially adapted to industrial villages. Used by many of the largest corporations.

***Thoroughly substantial. Costs less than half the ordinary house. Quickly erected. Absolutely guaranteed.***

Saves architect's, contractor's, lumber dealer's and jobber's superfluous profits. Cost of manufacture and erection cut in half.

***It Will Pay you to Investigate.***

***Address***

***QUICKBILT Bungalow Department F118***

***A. C. Tuxbury Lumber Co., Charleston, S. C.***

# STRUCTURES YOU NEED ARE IN STOCK

## *Factory-Built Complete*

**"Circle A" Unit Buildings have housed 12,000 persons** comfortably and economically since the ending of the war. These "Circle A" structures—schools, residences, mess halls, recreation buildings, warehouses, factories, hospitals, barracks, offices, churches, filling stations, etc.—are stronger and afford greater protection against heat, cold, wind and dust than if standard built. They are meeting successfully the urgent yet exacting requirements of some of the largest industrial organizations. The "Circle A" purchases of one big corporation, for instance, have amounted to a quarter of a million dollars.

**There is no other building system like it.** The "Circle A" units are interchangeable, and are shipped promptly upon order to any point in the world. And although "Circle A" Buildings are permanent they can, when desired, be taken down and re-erected. Their salvage value is therefore 100 per cent, and they should not be confused with the so-called portable buildings.

**Use the local labor in your own plant.** Put your building problem in our hands. Within a few days from the time you read this advertisement we can have your buildings in transit. And the car tracers in our employ will follow them right up, until they reach their destination. They will then be unloaded and erected under the personal supervision of one of our superintendents.

***For further information write or wire our nearest office—Chicago, New York, Ft. Worth, Detroit. If you so request, a representative from our Engineering Department will call at your office and present the "Circle A" story of quick building.***

## THE ALEXANDER LUMBER COMPANY

# "CIRCLE-A"

Patents Pending.

## INTERCHANGEABLE UNIT BUILDINGS

# Industrial Housing

## QUICK SHIPMENT

**A Train Load of ALADDIN Houses Per Day**

Depending upon size of house, we load from one to three complete houses in each car. Normally, shipments arrive at Atlantic Coast points in about six days after leaving our mill.

## QUICK RESULTS

**A Gang of 120 Men Can Erect 10 ALADDIN 5-Room Houses Per Day**

Aladdin Houses are Readi-Cut. Every piece of material, joists, studs, rafters, sheathing, siding, flooring, interior finish, is cut to proper size, marked and numbered and ready to nail in place.

## SERVICE PLUS

**Immediate Action on Any City Project—or Any Housing Problem**

Our plans are drawn, prepared and finished for cities of from 300 to 3,000 poulation. Experienced town planners, landscape achitects, engineers and builders have spent months of study and work in their production. This service becomes a part of every Aladdin Housing transaction—a single house or a complete city.

**Over One Thousand ALADDIN Houses Carried in Stock**

All lumber, shingles, lath, millwork, siding, flooring, interior finish, plaster, hardware, paints, nails, are carried constantly in stock, ready for instant shipment.

**Hundreds of American Corporations Have Built ALADDIN Houses**

As many as five hundred Aladdin houses have been sold to a single corporation. Re-orders are constantly received from corporations who have tested our houses by actual purchase and erection.

**A Single House—or A Complete City**

The Aladdin Company will quote you a definite price on a single house or complete cities of 300, 500, 600, 1,000, 1,500 and 3,000 population. These cities are now listed in our book on Industrial Houses. Cities include homes, stores, churches, schools municipal buildings, water distributing systems, electric light plants and distribution, sewerage systems, trees, etc. "Book of Aladdin Homes" No. 620 with full information, floor plans and prices will be mailed on request. Aladdin Book "Industrial Housing" mailed only to inquiries written on business or official stationery.

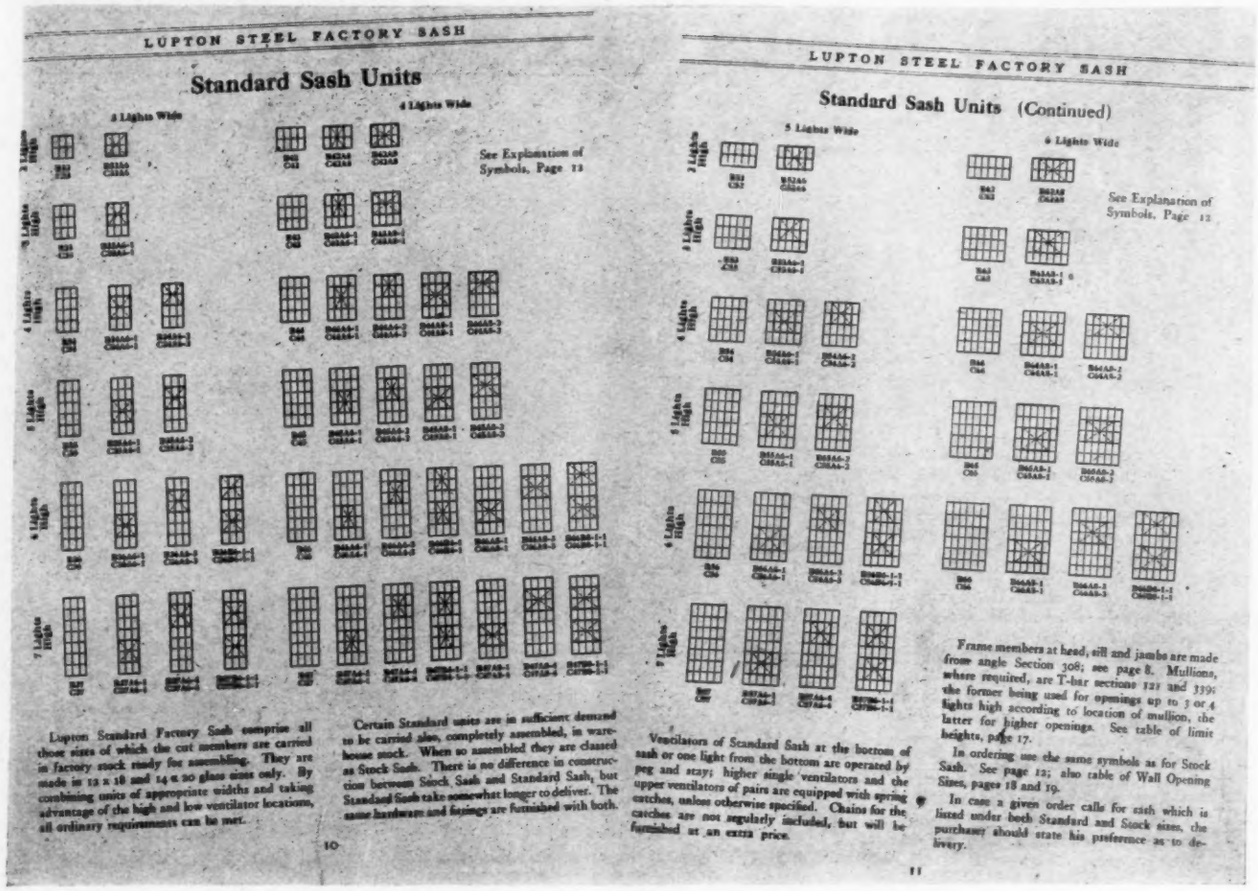
## Complete Cities

## -or a Single House

ALADDIN READI-CUT HOUSES Sold By The GOLDEN RULE

# The Aladdin Co.

621 SOVEREIGN AVE., HOME BUILDERS TO THE NATION TOWNBUILDERS TO THE NATION HATTIESBURG, MISS.


LUPTON STEEL FACTORY SASH
Standard Sash Units
3 Lights Wide
4 Lights Wide
See Explanation of Symbols, Page 12
Lupton Standard Factory Sash comprise all those sizes of which the cut members are carried in factory stock ready for assembling. They are made in 12 x 18 and 14 x 20 glass sizes only. By combining units of appropriate widths and taking advantage of the high and low ventilator locations, all ordinary requirements can be met.
Certain Standard units are in sufficient demand to be carried also, completely assembled, in warehouse stock. When so assembled they are classed as Stock Sash. There is no difference in construction between Stock Sash and Standard Sash, but Standard Sash take somewhat longer to deliver. The same hardware and fittings are furnished with both.
10
LUPTON STEEL FACTORY SASH
Standard Sash Units (Continued)
5 Lights Wide
6 Lights Wide
See Explanation of Symbols, Page 12
Ventilators of Standard Sash at the bottom of sash or one light from the bottom are operated by peg and stay; higher single ventilators and the upper ventilators of pairs are equipped with spring catches, unless otherwise specified. Chains for the catches are not regularly included, but will be furnished at an extra price.
Frame members at head, sill and jambs are made from angle Section 308; see page 8. Mullions, where required, are T-bar sections 121 and 339; the former being used for openings up to 3 or 4 lights high according to location of mullion, the latter for higher openings. See table of limit heights, page 17.
In ordering use the same symbols as for Stock Sash. See page 13; also table of Wall Opening Sizes, pages 18 and 19.
In case a given order calls for sash which is listed under both Standard and Stock sizes, the purchaser should state his preference as to delivery.
11

# Order From These Sizes

These are the recommended sizes of Lupton Pivoted Factory Sash.

Cut bars of these sizes are carried in factory stock, ready to be assembled and riveted into sash when your order is received.

Sizes—frame members—ventilator locations—fittings and hardware—all are standard. No designing necessary—no correspondence regarding this or that special detail; you know just what to order in the first letter.

For concerns whose requirements can be standardized, Lupton Standard Factory Sash units offer the means of combining high quality with the quickest practicable deliveries.

Details are fully told in the No. 10-LSS catalogue, which supersedes the Factory Sash chapter of our No. 9 catalogue. Have you received your copy?

## DAVID LUPTON'S SONS COMPANY

**Amber St. and Allegheny Ave.** **Philadelphia, Pa.**

***Makers of Modern equipment for daylight and natural ventilation***

Chicago
New York
Pittsburgh
Cleveland
Washington
Boston
Detroit

***Canadian Manufacturers:*** ***The A. B. Ormsby Co., Ltd., Toronto***

Lupton
Lupton Steel Sash
Pivoted Factory Type
Counterbalanced Type
Pond Continuous Sash
for sawtooths, monitors and side walls
Pond Operating Device
for long lines of sash
Lupton Rolled Steel Skylight
"INVESTMENT VALUE"

Lupton
INVESTMENT VALUE

# USONA

UNITED STATES OF NORTH AMERICA

# Inlaid Ornamental Asphalt Roofings

***Economical***
***Attractive***
***Durable***
***Fire Resisting***

***Approved by the Underwriters Laboratories***

HERE'S a perfect roofing that is not only economical in first cost, but contains the features that can be found only in high-priced roofings.

USONA Inlaid Ornamental Asphalt Roofings are made of quality dry roofing felt into which is saturated pure asphalt. Stone chips of natural colors are secured to the top side of the roofing with a heavy coat of pure asphalt. The designs are inlaid, not printed, and are furnished in different color combinations, red and black, green and black, red and green, etc.

*Actual photograph of Red and Green Diamond Roofing laid over wood shingles.*

The use of USONA Asphalt Roofings on the cottages of your village will not only make an extraordinarily attractive village, but in addition will eliminate roof repair expenses—in short be an investment that will pay in several ways.

*Actual photograph of Black and Green Up-Down Diamond Roofing laid over old wood shingles.*

USONA Roofings can be laid directly over an old shingle roof, applied crosswise or up and down, and simple nailed at the edges—no cementing. Conforms to the shape of the shingles and no roughness is apparent. Protects and preserves the shingles and affords double roof protection and attractive appearance.

USONA Roofings are in wide use on residences, churches, and buildings of all kinds.

*Write today for samples or prices.*

**THE ASPHALT ROOFING PRODUCTS CO.**

**CANDLER BLDG. ATLANTA, GA.**

# BRUSH-ON
## New Life for Roofs

THE best roof in the world is going to leak sometime—*unless you keep the surface intact.* If your roof leaks now, BRUSH-ON will make it watertight. If the surface is just beginning to go, BRUSH-ON will save it.

Many a leaky roof has been given new life with BRUSH-ON. BRUSH-ON is a substantial material, composed of long fibre asbestos on an elastic gum base, properly combined with heavy asphaltum oil. Applied with a brush, this makes a firm, tough, weather-resisting coating that permanently seals all cracks and holes of every size. BRUSH-ON gives perfect protection over any roof of any material whatever—for from five to ten years.

Why go to the expense of putting on an entirely new roof, when you can permanently renew your old one for less than a cent and a half per square foot?

*Write for a barrel today. Put it on your roof and take a month to prove it out. Then, if you think BRUSH-ON is worth the money, you can pay the bill.*

*The*
# VORTEX
Manufacturing Co. Cleveland, Ohio.

# Plant Upkeep and Production

Plant upkeep and production are inseparable. When upkeep is neglected, production invariably suffers.

Clean, white walls are one of the main essentials to both.

Sta-White—the pure white oil paint for industrial interiors—retards depreciation—keeps the plant in topnotch shape for maximum output.

Sta-White reflects and increases light--creates bright, cheerful working conditions.

Its high quality and durability has been demonstrated in service in a vast number of plants.

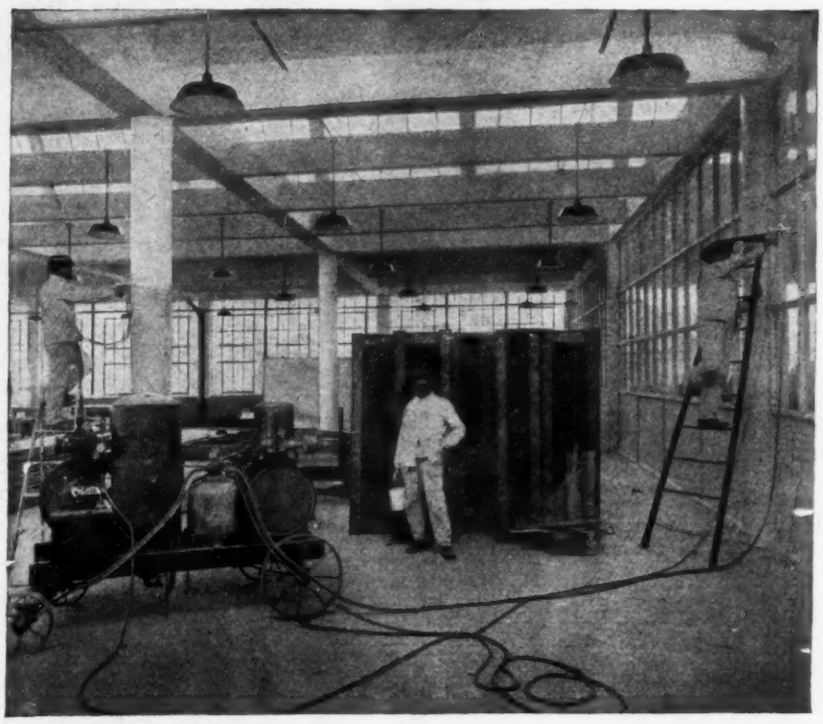
*Sta-White is preferred because its use eliminates frequent repainting---reduces the ultimate per year painting cost to a minimum.*

When you paint—it will pay you to remember Sta-White. It does not chip or peel. It stays white.

**Detroit Graphite Company**
***Makers of***
***Paints in all colors for all purposes***
**107 Twelfth St. Detroit, U. S. A.**
***Offices and Warehouse Stocks in All Principal Cities.***

# Painting the AERON Way

***Reduces Cost and Confusion of Mill Painting—Insures a Better Job***



THAT clean, light-radiating mill walls are a big factor in increasing and improving production, reducing seconds and making working conditions more healthful, is admitted.

Now that the confusion and high cost problem of occasionally repainting the mill interior has been solved by the Aeron spray-painting system, this work can be done as often as necessary on a simplified and economical basis.

Painting the Aeron way, one man will do the work of at least four or five men with the hand-brush-and-pail method. The material is always at the nozzle ready to be applied by pulling the trigger. The former big labor expense item is reduced four-fifths.

There is no serious interruption to mill operation. There is no spattering or dripping of paint. Less scaffolding is required. Painting confusion is minimized.

ADDED to these economies and advantages, is the uniform, streakless and complete coating of the Aeron-sprayed surface. Even those places which should have paint but are hard or impossible to reach with the brush, are easily reached with the Aeron and properly coated.

Aeron System Portable Painting Equipment can be used to the same advantage on outside painting as on the inside work, applying any kind of paint on any type of surface.

The outfit is easy to operate, and can be quickly moved from place to place.

Its simple and dependable construction saves time in cleaning and expense in operation.

Aeron Painting System
(Surpasses Brushing)

## Portable Painting Equipment

***Sold on a strictly guaranteed-to-make-good basis***

Definite information on any particular painting problem and full equipment and operation facts of the Aeron System will be gladly mailed to you.

## The DeVilbiss Mfg. Co. 1322 Dorr St. Toledo, Ohio

# SHERWIN

## *Speeding up Production with Paint*

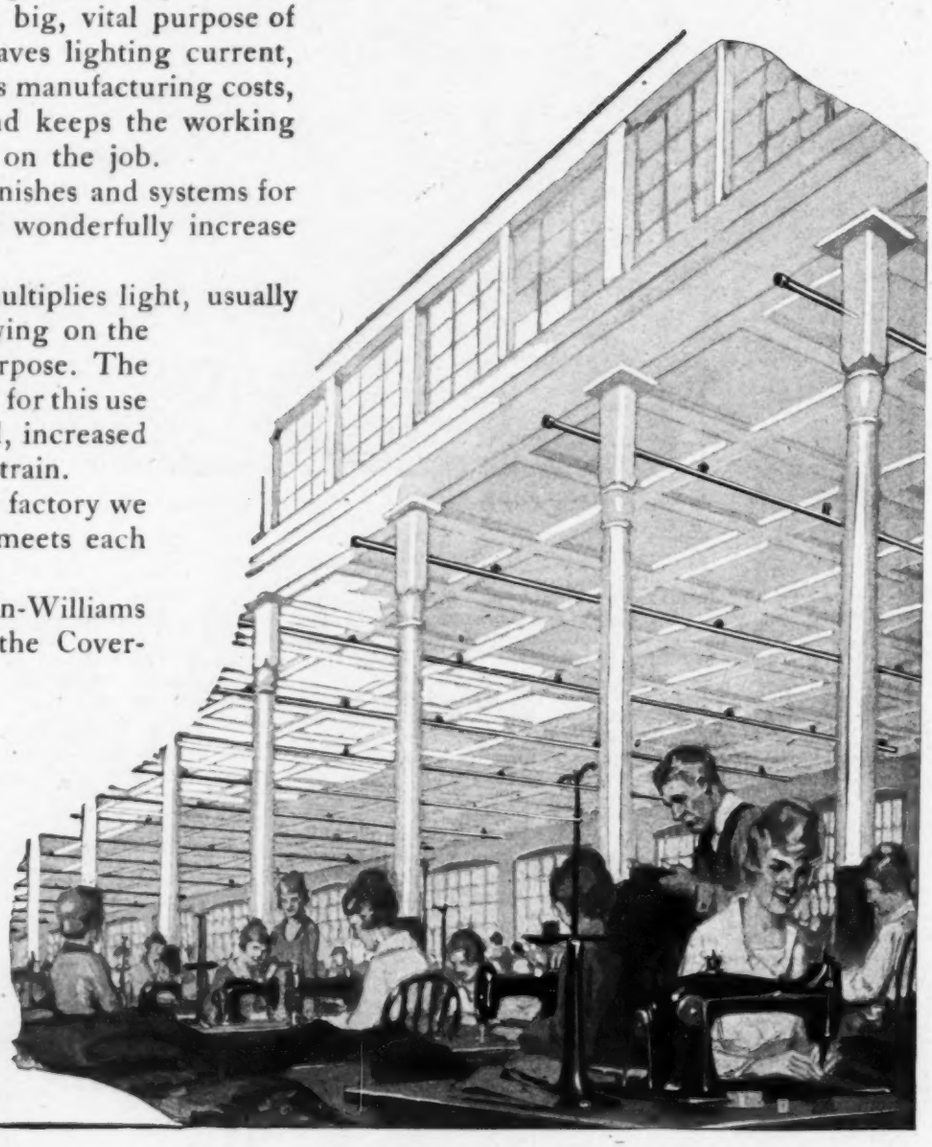
FACTORY owners who paint merely to cover the walls overlook the big, vital purpose of factory painting. Paint saves lighting current, speeds up production, cuts manufacturing costs, assures accurate work and keeps the working force healthy, happy and on the job.

We have worked out finishes and systems for mills and factories, which wonderfully increase operating efficiency.

A white paint which multiplies light, usually produces a glare that is trying on the eyes, defeating its major purpose. The Sherwin-Williams Product for this use gives a soft, evenly diffused, increased light which relieves eye strain.

For every purpose in the factory we have a finish that exactly meets each condition.

That is a typical Sherwin-Williams service, one meaning of the Cover-the-Earth trademark.



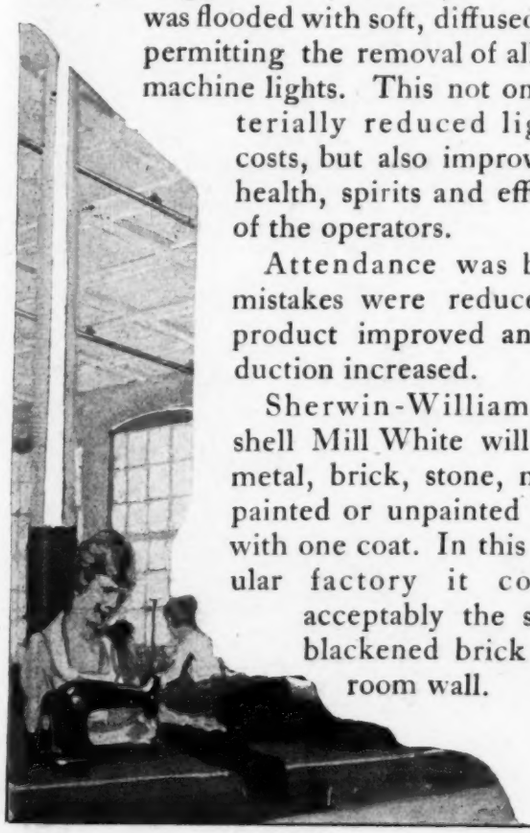
**PAINTS VARNISHES**
**DYESTUFFS COLORS**

# WILLIAMS PRODUCTS

## *Flooding a Factory with soft daylight by means of paint*

IN a cotton fabric factory at Newburgh, N. Y., the operators worked at machines with electric lights shining directly on their needles.

When the walls were painted with Sherwin-Williams Eggshell Mill white, the factory was flooded with soft, diffused light, permitting the removal of all of the machine lights. This not only materially reduced lighting costs, but also improved the health, spirits and efficiency of the operators.



Attendance was better, mistakes were reduced, the product improved and production increased.

Sherwin-Williams Eggshell Mill White will cover metal, brick, stone, mortar, painted or unpainted wood, with one coat. In this particular factory it covered acceptably the smoke-blackened brick boiler room wall.

Sherwin-Williams Dado Enamel, a wear-resisting paint, applied to the walls elbow high, prevented soiling where grimy hands touched.

Sprinkler carriers were indicated by Sherwin-Williams Safety Red. Electric conduits, steam carriers and other pipes and wires have their special colors and can be instantly identified anywhere in the plant.

Sherwin-Williams Metalastic covers and protects all metal surfaces. Sherwin-Williams Concrete Floor Finish prevents dusting. Sherwin-Williams Lustral Enamels are used on all machinery.

We have worked out complete systems for the maintenance of some of the largest factories in the country.

Factory finishes represent one phase of our business. Finishes for manufactured products is another. The practical use of these finishes is essential to secure the best results. We furnish this service through our Paint Engineers specializing in Plant Maintenance and Modern Finishing Methods.

Send for book on Industrial Upkeep.

THE SHERWIN-WILLIAMS CO.

Address Main Correspondence Office, 601 Canal Road, N. W., Cleveland, Ohio

**PIGMENTS, CHEMICALS, INSECTICIDES DISINFECTANTS AND WOOD PRESERVATIVES**

# MORE THAN THREE CARLOADS

used by the Loray Mills, Gastonia, N. C., during the past three years—
That's the record of Pee Gee Industrial Paints—It speaks for itself
—but read the interesting letter of Mr. Wm. D. Anderson—it
tells all about the superior merits of the following two brands:

## Pee Gee Factrilite

**FOR WALLS AND CEILINGS OF MILLS**

has a high-gloss, tile-like finish of highest reflective power and supplies more and better light by reflecting and diffusing Sunlight as well as artificial light to every corner of your mill.

It is made by our own perfected process of especially prepared white pigments and long oil, therefore **it will not turn yellow** like ordinary mill whites which contain lead and varnish. Pee Gee Factrilite stays white for years, is washable, germ and moisture proof and is the most economical Mill White.

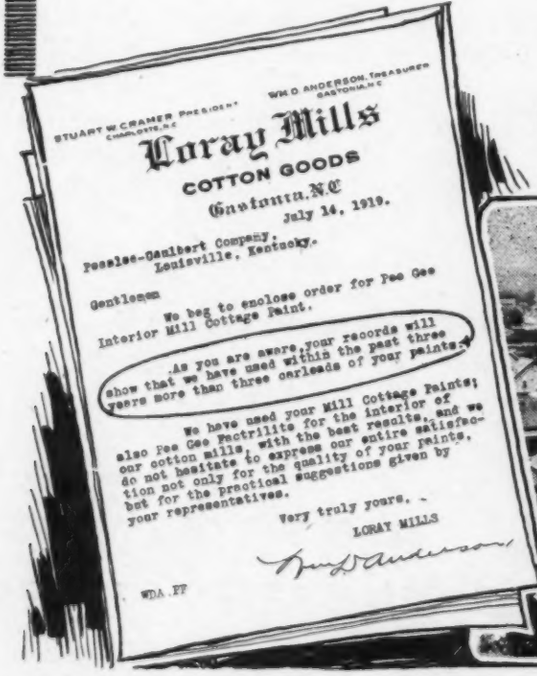
## Pee Gee Mill Cottage Paint

**contains highest percentage of ZINC.**

**FOR EXTERIORS**—it is a combination of lead and zinc, lasts longer, goes further and is superior in every respect to paint made of lead alone. It will not crack, peel, or chalk off and will give you the best possible results in points of wear, beauty and finish.

**FOR INTERIORS**—it is especially made to withstand the hardest use. Dries readily with a high gloss finish and can be easily cleaned with soap and water, and therefore is the most economical paint for Mill Cottage Interiors.

Write for Booklet on "Pee Gee" Industrial Paints.



STUART W. CRAMER, PRESIDENT, CHARLOTTE, N. C.
WM. D. ANDERSON, TREASURER, GASTONIA, N. C.

Loray Mills
COTTON GOODS
Gastonia, N.C.
July 14, 1919.

Peaslee-Gaulbert Company,
Louisville, Kentucky.

Gentlemen

We beg to enclose order for Pee Gee Interior Mill Cottage Paint.

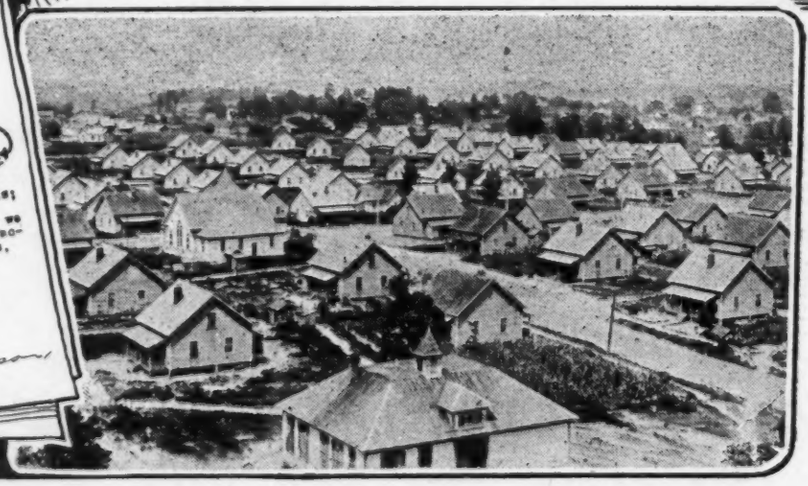
As you are aware, your records will show that we have used within the past three years more than three carloads of your paints.

We have used your Mill Cottage Paints; also Pee Gee Factrilite for the interior of our cotton mills, with the best results, and we do not hesitate to express our entire satisfaction not only for the quality of your paints, but for the practical suggestions given by your representatives.

Very truly yours,
LORAY MILLS

Wm D Anderson

WDA.FF



## Peaslee-Gaulbert Co.

**ncorporated**

**Established 1867** **Louisville, Ky.**

# EXCELLO PRODUCTS

## THE EVER-TITE WAY

A PERFECT BOILER COVERING FOR FUEL ECONOMY

ONE of the greatest causes of fuel waste in the boiler room is an unsealed brick boiler setting. Every little pore and crack draws in cold air which destroys $CO_2$.

Make that setting permanently air and moisture proof with a coating of EVERTITE. Once on, it never cracks or peels and will last as long as the boiler.

Hundreds of the largest plants in the country are saving from 3% to 10% of their fuel by the use of EVERTITE. Our guarantee protects you. You have nothing to lose and everything to gain, so start today to save coal—coat your boiler setting with EVERTITE.

## DUROLITH

**A LIQUID CHEMICAL THAT MAKES CONCRETE FLOORS WEAR AND DUST PROOF**

Make your concrete floors permanent and eliminate constant repairs and patching.

First, they begin to dust, then they begin to pit and get rough, next they begin to crack and finally big ruts and holes appear, which require continually patching and finally the laying of a new floor.

Protect your floors with DUROLITH. It penetrates down into the porous concrete, sets up a chemical action that hardens and solidifies the entire mass, rendering the concrete granite like, and making it dust proof and wear proof.

Inexpensive and can be applied by anyone and the floor used the next morning.

## SPRAYLITE

**A PERFECT WHITE OIL PAINT FOR USE WITH PAINT SPRAYS**

You already know the advantages of perfectly white, light-reflecting walls and ceilings.

SPRAYLITE is a perfect white that stays white, and produces a beautiful, white reflecting surface that can be washed as often as you choose.

Most oil paints have to be brushed on by experienced painters, which is very expensive and wastes paint. SPRAYLITE is the only oil paint we know of that can be applied with a spray, and a cheap, hand-pump spray will be very inexpensive and will mean a good investment.

SPRAYLITE lasts for years. Its use means economy, both in first cost and in long life.

## Economite

**A PERFECT ROOF COATING THAT LASTS FOR YEARS**

The average thickness of a coat of roof paint is about 1/100 of an inch—a film as thin as a sheet of paper—too thin to give the roof protection you need.

A single coat of ECONOMITE gives a better coating 1/32 of an inch thick, and will last for six years—which we guarantee.

ECONOMITE is made from plastic water proofing compounds, preservative oils and pure rock asbestos. It is applied with a brush just like paint.

Can be applied to any old rusty tin roof, or a composition, gravel or rubber roof, and makes a solid, one-piece, waterproof roof that lasts for years and will not chip, peel, become brittle, nor run in hot weather and will not sag or buckle like paint.

EVERTITE means a perfect and permanent roof without repair expense.

**THE EXCELLO MFG. CO., Cleveland, Ohio**

FILL OUT COUPON BELOW AND MAIL TODAY

**Excello Mfg. Co.,**
**1836 Euclid Ave.,**
**Cleveland, Ohio.**

Gentlemen:—Please send me full data and prices on the products which I have checked below (check those in which you are interested).

- ☐ Evertite—The Boiler Covering
- ☐ Durolite—The Concrete Hardener
- ☐ Spraylite—The White Oil Paint
- ☐ Economite—The Roof Coating

Name .....

Position .....

Mill .....

City ..... State .....

# Hydro-Kaustine

## (Enameled Iron)

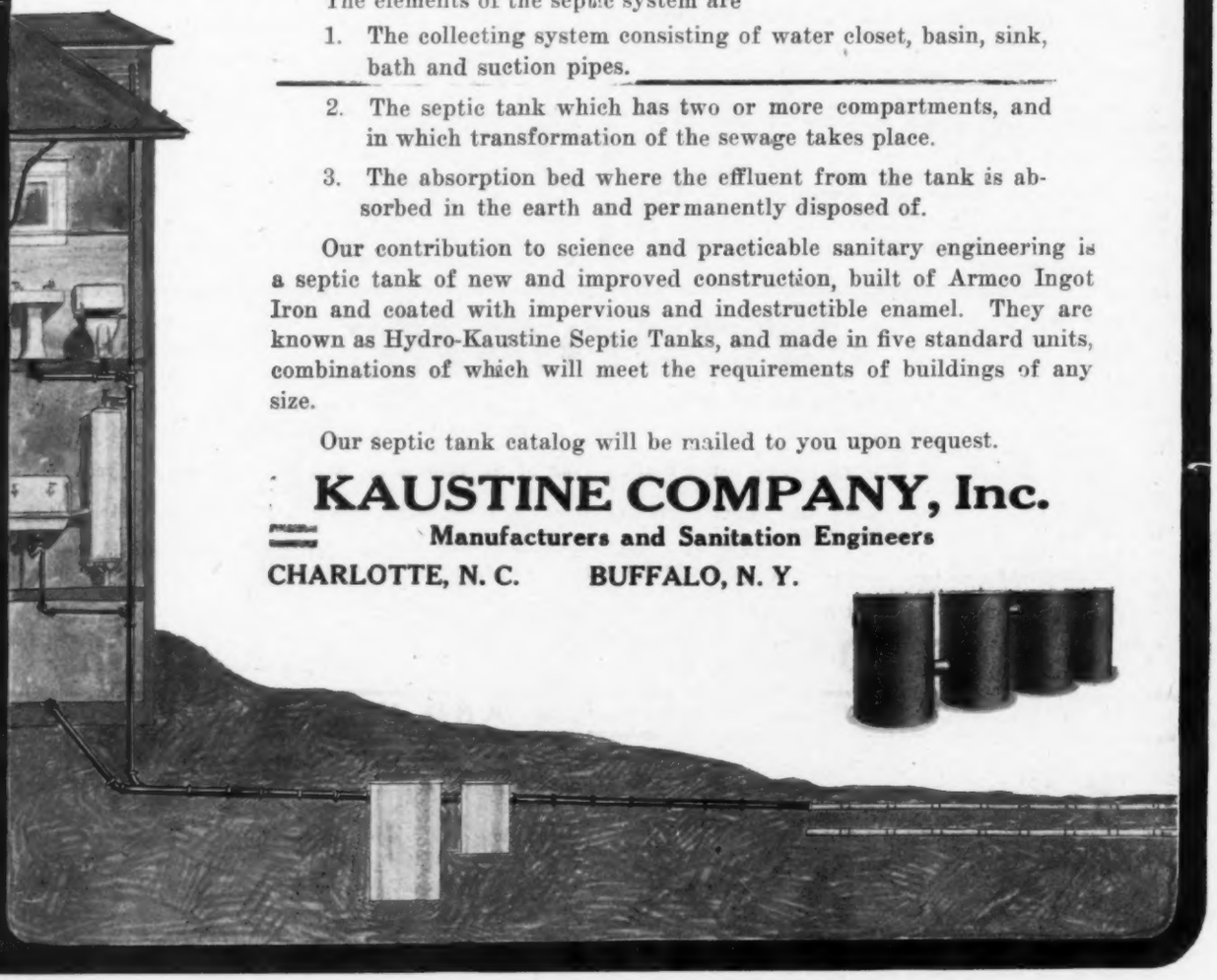
# Septic Tanks

Hydro-Kaustine Septic Tanks are the latest of Kaustine products—an unparalleled achievement in sanitary sewage disposal for unsewered areas.

It is in their construction that Hydro-Kaustine Tanks differ from other septic tanks. Instead of masonry, they are built of Armco (The Pure) Iron—rust-resisting and coated with enamel, an everlasting protection to the metal.

Where a water supply is available and where plumbing of the buildings can be considered, the Hydro-Kaustine System of septic tanks affords a ready and most practicable means of providing disposal of household refuse.

The septic process is one that takes advantage of the fact that sewage contains the means of its own destruction.



The elements of the septic system are

1. The collecting system consisting of water closet, basin, sink, bath and suction pipes.
2. The septic tank which has two or more compartments, and in which transformation of the sewage takes place.
3. The absorption bed where the effluent from the tank is absorbed in the earth and permanently disposed of.

Our contribution to science and practicable sanitary engineering is a septic tank of new and improved construction, built of Armco Ingot Iron and coated with impervious and indestructible enamel. They are known as Hydro-Kaustine Septic Tanks, and made in five standard units, combinations of which will meet the requirements of buildings of any size.

Our septic tank catalog will be mailed to you upon request.

## KAUSTINE COMPANY, Inc.

**Manufacturers and Sanitation Engineers**

**CHARLOTTE, N. C. BUFFALO, N. Y.**

# Kaustine

## (Chemical)

# Toilet Systems

In districts and communities where there are no sewer or water connections, Kaustine Toilet Systems offer the logical solution of the sanitation problem. Mill and factory owners who maintain colony houses for their employees have realized the need of a really sound and safe system of sewage disposal. With the Kaustine System they have entirely eliminated the disease-breeding outhouse, and they have given their workers real city conveniences. Kaustine installation has reduced the labor turnover in industrial districts. It has increased production by fostering contentment among workers.

## How The System Works

Sewage falls directly into an Enameled Armco Iron Tank, where it is liquefied, deodorized and disinfected by Kaustine, a powerful chemical and germicidal resolvent. After sterilization, the contents of the tank may be drained into the leaching pool.

All metal parts are of Armco (The Pure) Iron, and are specially treated. The bowl is thoroughly ventilated by strong positive air currents. Through ventilation the air in bowl is continually undergoing change, being drawn upward through a vent pipe and discharged above peak of roof.

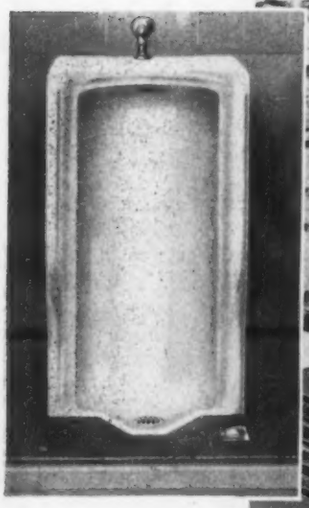
No labor is involved in the upkeep. There is no dipping or pumping as in other chemical closets.

The Kaustine Tank may be installed in the basement or placed underneath the house.

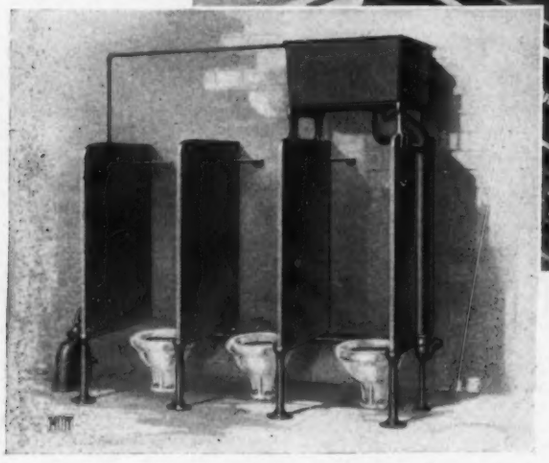
Read the story of Kaustine and how the system has revolutionized sanitation in mill and factory villages throughout the country. The Kaustine catalog will be mailed to you on request.

**KAUSTINE COMPANY INC.**
**Charlotte, N.C. Buffalo. N.Y.**

1828 MOTT 1919



The "Sanito" Urinal Stall with Flush Valve in Floor is a safeguard against contagion.



THE PRIVUS LATRINE

with bowls of heavy vitreous ware combines the privacy of the separate closet with the strength, simplicity and strong flush of the water closet range.

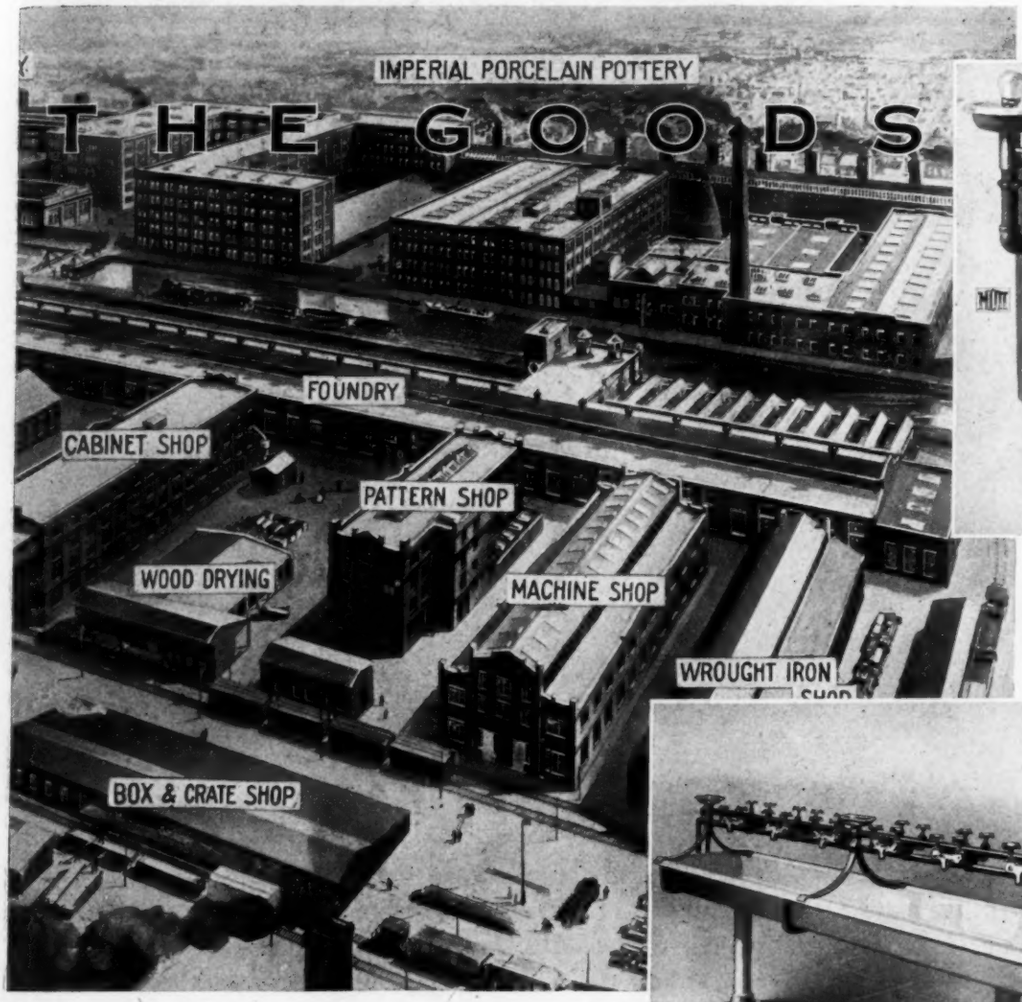
**COTTON MILL**

Our many years of experience in manufacturing plumbing fixtures has enabled us to devise and carry out the most approved ideas in Factory Sanitation. Our Engineering Dept. is prepared to give expert advice and technical information in the laying out of plumbing equipment.

# MOTT SOUTHERN COMPANY

## Peters Street Viaduct

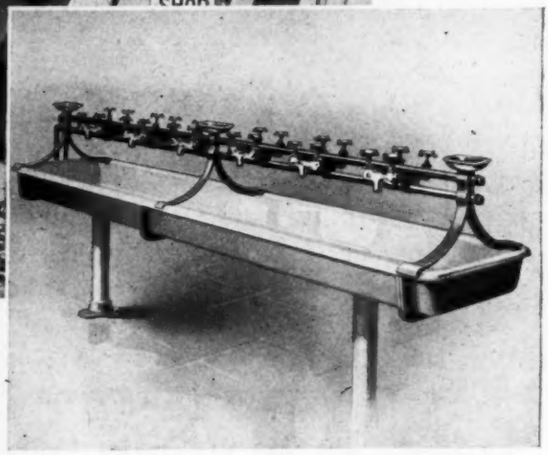
1828 **MOTT** 1919



The "Coolstream" Drinking Fountain for satisfaction and economy.

## PLUMBING

Not only do we manufacture all the goods we sell, but we manufacture them in one comprehensive plant which is undoubtedly one of the most complete and thoroughly equipped of its kind. Mott Plumbing Fixtures are giving satisfactory results in many representative plants throughout the country.

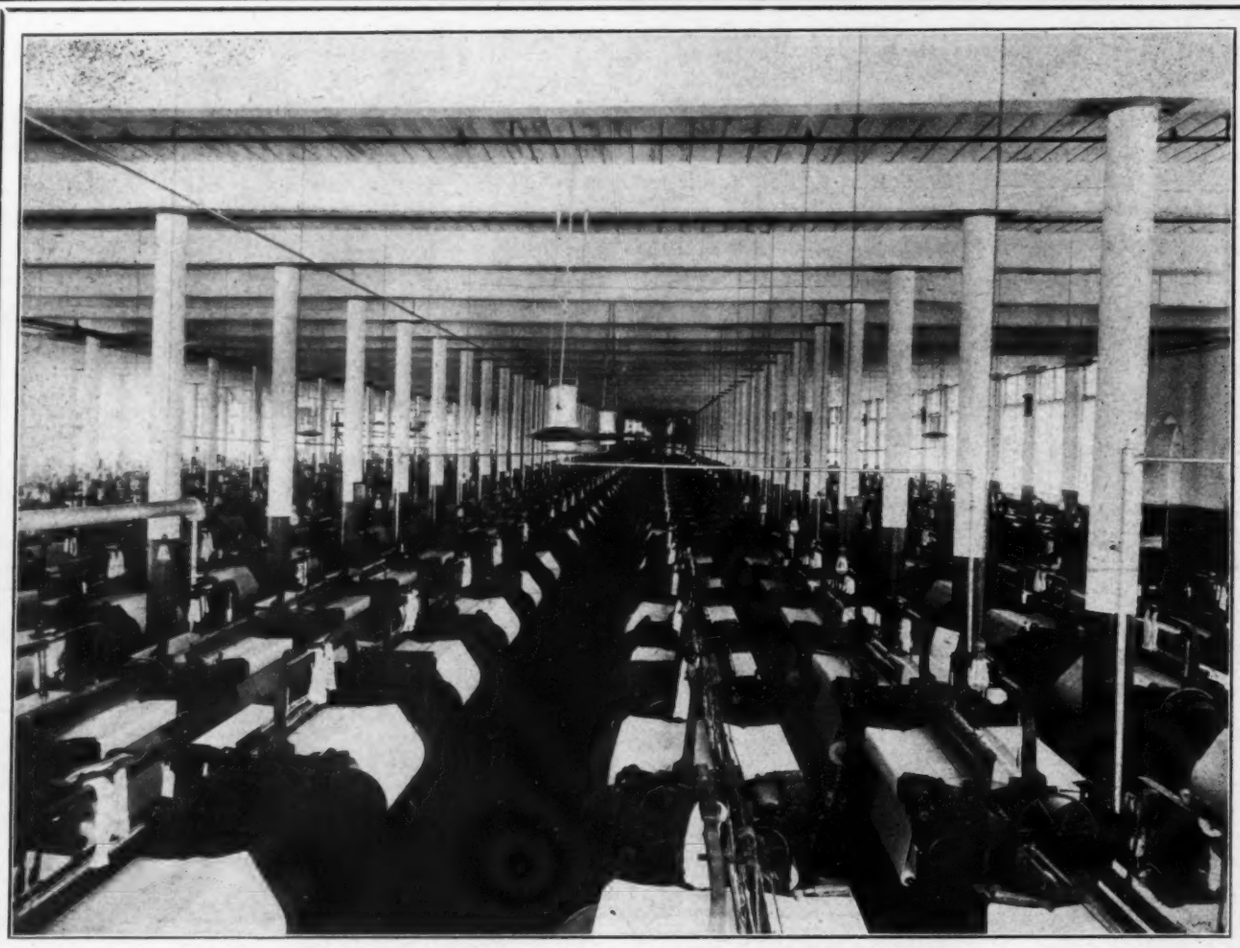


THE "FACTORO" WASH SINK

with combination supply permitting a number of employees to wash at the same time under hot, cold or mixed water.

## OFFICES, SHOWROOM AND WAREHOUSE

## Atlanta, Georgia



# DAYLIGHT

In **any** mill is of the utmost importance. In a cotton mill it means the difference between success and failure. The fine threads, the intricate machinery, the delicate handling, require not only keen eyesight but plenty of daylight.

Dingy and blackened walls or ceilings absorb light to an enormous degree, making fine work impossible. A good coat of white paint will reflect and conserve every useful ray of daylight. By far the best paint for mill work of this sort is

# DIXIELITE

a mill white designed expressly for the purpose and made in gloss, semi-gloss and flat finish as desired.

*Manufactured only by*

**WADSWORTH, HOWLAND & CO., INC.**

**139-141 FEDERAL ST.**

**BOSTON, MASS.**

# Cyclone Centralized Entrances

## Do away with the Habit of "Come-and-go-as-you-please"

Cyclone Fence gives you complete control of your factory grounds—enables you to bar out all undesirables—makes all territory within the enclosure a "Safety Zone"—promotes greater efficiency of workmen.

Cyclone Fence is "Preventive Insurance"—an investment that pays big dividends by stopping losses of supplies, raw materials, machinery parts, etc.—the watchman's efficient helper. Saves its cost every year in watchman's wages.

# Cyclone Property Protection Fencing

Substitutes mechanical certainty and precision for human fallibility. A continuous wall of woven steel, non-climbable, shock and strain-resisting. Stands guard on every foot of your factory premises, day and night—relieves you of anxiety for the safety of your property.

Our expert engineers will be pleased to offer suggestions, plans and sketches for your approval, in which your particular needs are served most efficiently and economically.

*For prompt action, wire, phone or write Main Offices at Waukegan, Illinois, or Branch Offices nearest you.*

Look for the "Red Tag" on all Fence Fabric, Gates or other wire products you buy. It is a guarantee of superior quality.

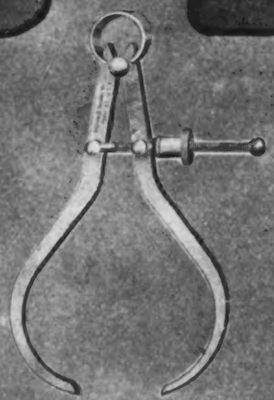
## CYCLONE FENCE COMPANY

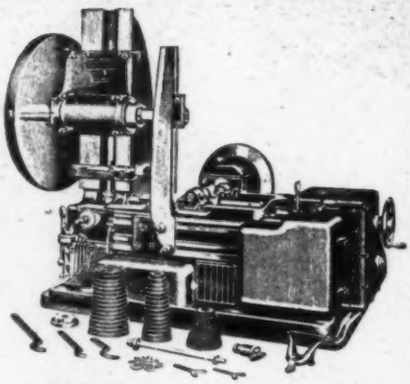
**Factories:** Waukegan, Illinois Cleveland, Ohio
**Branch Offices:** Chicago, Detroit, Rochester, Philadelphia
New York City, Oakland, Calif., Portland, Ore., San Francisco
Fort Worth, Texas

# Machine Tools, General

# SEEGER-WAL

38 West Alabama Street





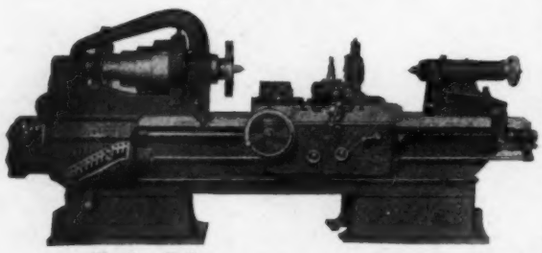
Brown & Sharpe Automatic Gear-Cutting Machine

## Prompt Service

"The House You Know" is right at your back door, ready with the big stock to furnish you almost upon an instant's notice with the hundreds of tools and supplies that you have need for.

And not only prompt service, but we are ready with practical help and special co-operation at any time. With a force of practical men and complete stocks, we stand ready to help you with any problem you are not entirely clear on. Whatever your problem, whether in the selection of the right tools, special transmission equipment, special machines, or what not, our experts are ready to advise with you. Put your problem up to us, either in person or by mail. We'll furnish you with special plans, literature and suggestions.

"The House You Know" is the house that has your interests at heart, and want to serve you the way you want to be served. CALL ON US AT ANY TIME.

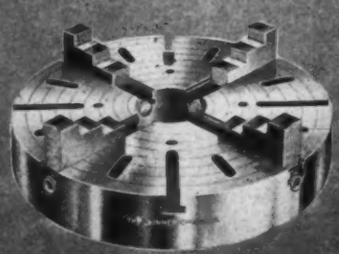


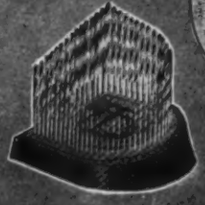
Hendey Lathe

### General Mill and Machinery Supplies

| | |
|---|---|
| BELTING | ELEVATING |
| HOSE | CONVEYING |
| PACKING | POWER TRANSMISSION |
| PIPE | AIR COMPRESSORS |
| VALVES | GAS AND OIL ENGINES |
| FITTINGS | PUMPS, ETC. |

Large Stock Brown & Sharpe Milling Cutters, Gear Cutters and Machinists' Tools





# Mill and Machinery Supplies

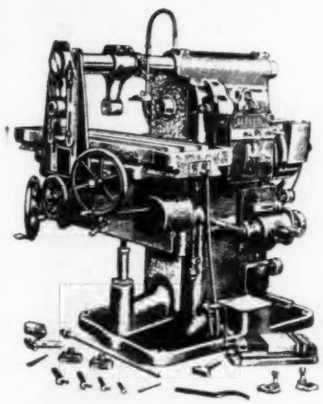
# SEEGER-WALRAVEN COMPANY

Atlanta Georgia

## Complete Satisfaction

The House of Seeger-Walraven Company, better known as "The House You Know", is truly Southern Headquarters for machine tools, mill and machinery supplies.

Mill Superintendents and practical master mechanics come to us for their needs, because they know that in addition to securing the most reliable and quality equipment at the right prices, they get the prompt service and co-operation that they want.



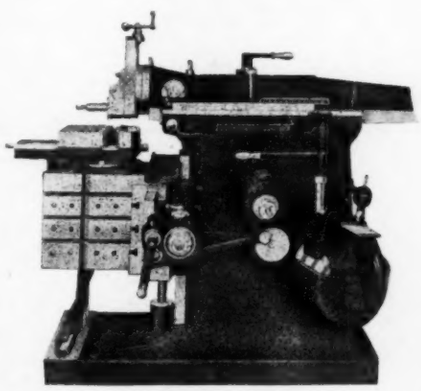
Brown & Sharpe Milling Machine

Specializing as we have for many years in machine tools and mill supplies, we have eliminated every piece of equipment that failed to give 100% satisfaction, and concentrate now solely on equipment that stands every test. Reliable and economic operation are the essential features of all machines and machine tools, and mill supplies that we handle. Everything that leaves our warehouses carries our fullest guarantee added to the guarantee of the highly responsible manufacturers.

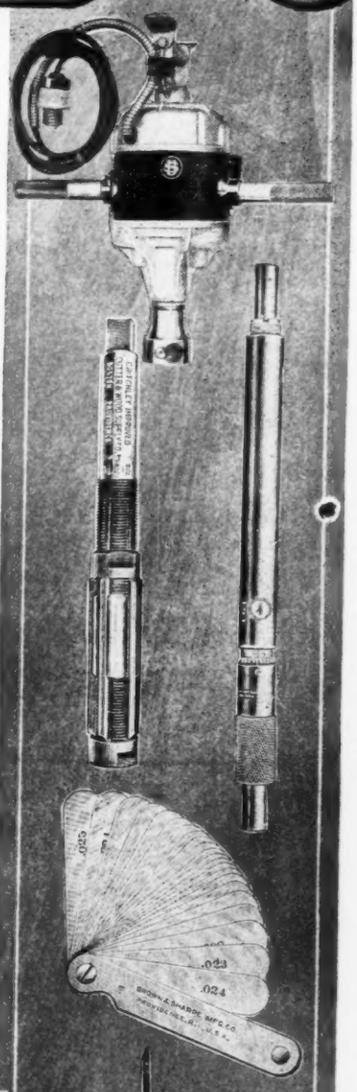
### The South's Leading Machine Tool House

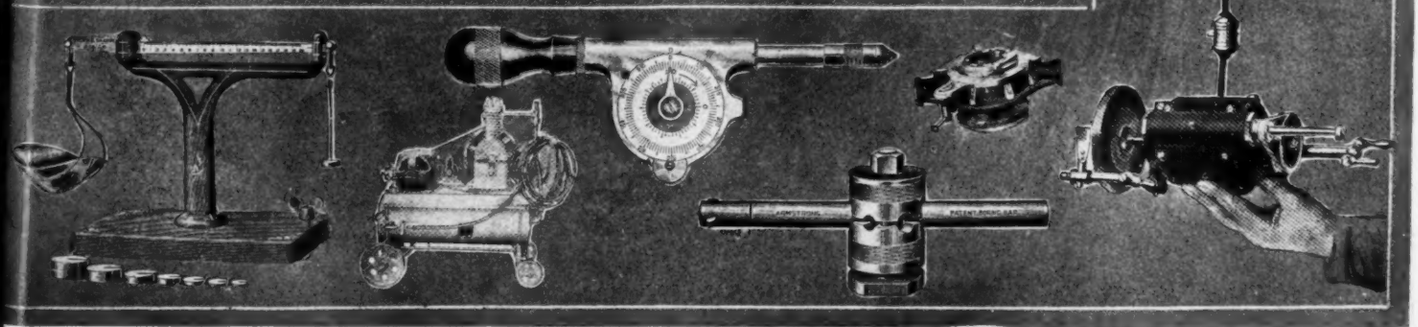
| | |
|---|---|
| LATHES | MILLING MACHINES |
| PLANERS | DRILL PRESSES |
| SHAPERS | ELECTRIC DRILLS |
| GRINDERS | ELECTRIC MOTORS |
| BOLT CUTTERS | ELECTRIC GRINDERS |
| GEAR CUTTERS | BORING MILLS, ETC. |

Electric Traveling Cranes and Foundry Equipment, Garage and Machine Shop Equipment



Hendey Shaper





# IMPORTANT ANNOUNCEMENT

WE ARE TAKING THIS MEANS to advise the trade in general that a competing concern of New York, has, after a long period of threats, brought suit against a user of a Refinite Water Softener, alleging infringement on patent rights claimed by that company. The Harvey Laundry Company of Buffalo, N. Y., which is now, and for the last two years has been, using a Refinite Water Softener, is the defendant named.

**We wish to announce that this court action is welcomed by us, as manufacturers of the Refinite Water Softener, and that this matter is being handled BY THE REFINITE COMPANY, through our general counsel, our special patent attorneys and by local counsel at Buffalo.**

In accordance with our guarantee to the Harvey Laundry Company, and to all other purchasers of REFINITE Water Softeners, *not one dollar in expense or one minute of trouble or annoyance will be placed upon them.* We have no fear of the outcome of this suit, as we have had the most careful investigation of all patent matters made by the highest authorities.

We promise you that this suit will be pushed to the earliest possible conclusion, and in the meantime are assuring you that we are doing business as usual and when desired by our patrons, furnishing in addition to our own guarantee a surety bond against infringement damages.

Our financial standing is ample to protect you. We are glad to refer you in this connection to any Omaha bank, or the mercantile agency of R. G. Dun & Company, or the Bradstreet Company.

Our division engineers nearest your locality are at your service, without expense, and Refinite Water Softeners are still furnishing water of no hardness at a minimum expense.

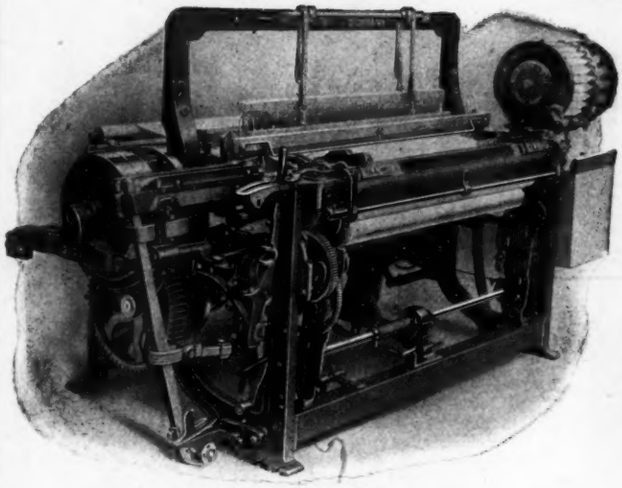
REFINITE
RIVAL OF THE CLOUDS
TRADE MARK
Nature's Water Softener

## THE REFINITE COMPANY

REFINITE BUILDING
OMAHA, NEBRASKA

NEW YORK CHICAGO CINCINNATI MINNEAPOLIS KANSAS CITY
ATLANTA PUEBLO
SALT LAKE CITY SAN FRANCISCO LOS ANGELES
TORONTO BUFFALO SPOKANE

# The Logical Loom Lubricant



THE world moves onward—step by step. New ideas—new methods—new men—must be produced to meet the new demands.

Just as improved looms are rapidly supplanting out-worn types—so NON-FLUID OIL, an improved lubricant, is replacing common greases and ordinary oils.

TRADE MARK REGISTERED IN
NON-FLUID OIL
UNITED STATES PATENT OFFICE

Liquid oil is wasteful and inefficient. It leaks out, drips, spatters and causes oil stains. Bearings require constant re-oiling to keep them from running dry—a loss of time as well as lubricant. Output of perfect goods from looms is cut down because of damage from oil.

Leading mills throughout the country have found it possible to get away from these drawbacks by using NON-FLUID OIL.

NON-FLUID OIL is highly adhesive and will never leak from bearings. With this product the customary intervals between oilings can be stretched from five to six times—less oil is used, less time spent in oiling and

*Oil Stains on Goods Are Eliminated*

NON-FLUID OILS are produced in grades suited to the lubrication of all kinds of textile machinery. Write for descriptive literature and free samples.

**For Cams Use "K-00" Special Grade.**
**NON-FLUID OIL**

**For Bearings oiled with squirt cans**
**Use "A-00000" grade**
**NON-FLUID OIL**

Lubricating the cams on looms is peculiarly difficult when the loom is in motion and the warp is on. Many mills have been securing excellent results by thoroughly oiling the cams with "K-00 Special" grade NON-FLUID OIL when the old warp is taken off—and then using "A-00000" grade FLUID OIL until the warp is changed again.

## Special Textile Grades of

TRADE MARK REGISTERED IN
NON-FLUID OIL
UNITED STATES PATENT OFFICE

*Sole Manufacturers*

**New York & New Jersey Lubricant Company**

**165 Broadway New York**

*Lewis W. Thomason, District Manager, Charlotte, N. C.*

**Warehouses at Charlotte, N. C., and Atlanta, Ga.**

Note: NON-FLUID OIL is not the name of a general class of lubricants, but of a specific product originated and produced by us exclusively.

# Permutit

TRADE MARK

## Water Rectification Systems

### Saved 1327 Tons of Coal in Six Months, And Turned Out a Better Product.

It was in a textile plant down in Pennsylvania—and the feed water they were using was considered "soft"—only 6 grains of hardness. But they'd had a lot of trouble with scale. They put in a **Permutit** Zeolite Water Softener, that gave them "zerowater"—then checked results, month by month, with the previous year—and here's what **Permutit** did:

**First month—saved 177 tons of coal.**
**Second month—saved 104 tons of coal.**
**Third month—saved 277 tons of coal.**
**First six months—saved 1327 tons of coal.**

Boiler cleaning became unnecessary. All boilers always available—no reserves needed. Boiler repairs practically done away with. Less labor needed in the boiler room.

And besides, they save a lot on soaps and dyes, get more uniform results in all their processes, turn out a better and more uniform product—all the result of using "zerowater."

How's that? Doesn't it sound good to you? Similar results await your adoption of "**Permutit,**" in your plant. Why go on wasting money? Send a sample of your feed water, today, with a statement of your water conditions and quantities. Then leave it to our engineers.

**The Permutit Company**

**440 Fourth Avenue, New York**

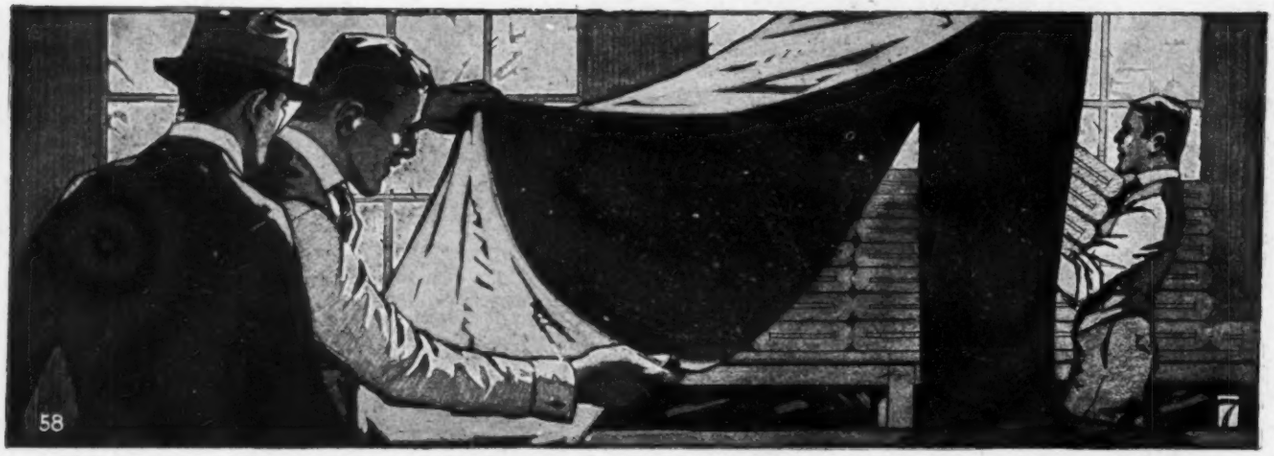
**Water Softeners Filters Iron Removal Apparatus**

**BRANCH OFFICES**

Philadelphia, Pa.: 311 Widener Bldg.
Buffalo, N. Y.: 304 Brisbane Bldg.
Syracuse, N. Y.: 1433 E. Genesee St.
Pittsburgh, Pa.: 921 Union Arcade Bldg.
Chicago, Ill.: 208 South La Salle St.
Kansas City, Mo.: 401 Lathrop Bldg.
Minneapolis, Minn.: 1046 McKn'ght Bldg.
Jacksonville, Fla.: P. O. Box 604.
Los Angeles, Cal.: 1141 Citizens Nat'l Bank Building.

**AGENTS**

Boston, Mass.: Starkweather & Broadhurst, 53 State St.
St. Louis, Mo.: Teeves & Skinner Machinery Co., 2211 Olive St.
Hamilton, Ontario, Canada: W. J. Westaway, 5 Sun Life Bldg.



CLEAN QUALITY
AND TROUBLE FREE!

NAME—SIGNIFICANCE

# DETROIT MICHIGAN
—AUTOMOBILES

# CHARLOTTE
NORTH CAROLINA
—LEATHER BELTING

?

WHY .....

*. . . because both these cities are so located that the necessary raw materials most needed in the product which made them well known can be more quickly and cheaply obtained in that territory and their quality selection, therefore, more readily controlled*

"CHARLOTTE" MEANS "LEATHER BELTING" TO THE WORLD OF TRANSMISSION

# LOGIC

*except to add Clean Quality Trouble Free*

**THE WHOLE STORY**

## CHARLOTTE, NORTH CAROLINA

in the Blue Ridge Mountains, covered with native oak forests . . . . would be . . . *(Naturally)* . . . a source of tan bark, and, as a matter of fact, is the HOME OF OAK TANNED LEATHER and the district where all of the oak bark tanning in America is done *(Consequently)* opportunity for the first and finest selections of genuine oak tanned *BELTING LEATHER* and under such conditions *(inevitably)* a product as good as

## CHARLOTTE LEATHER BELTING

THE CHARLOTTE LEATHER BELTING CO., CHARLOTTE, NORTH CAROLINA

# "The Standard" -Scales- Have a Reputation for Continued Accuracy

We are proud of this reputation, and proud to say that we never have to make excuses to our customers for inaccuracy even after long years of service.

For "THE STANDARD" is not only accurate at first, but it REMAINS ACCURATE, under most severe conditions.

"THE STANDARD" remains accurate because it is built with few parts, and built in such a rugged way that it won't get out of order even after years of knocks and abuse. Hundreds have seen years of service and are still good.

And "continued accuracy" is not the only superior feature of "THE STANDARD," but its many other features combine to make it the *perfect* weighing machine.

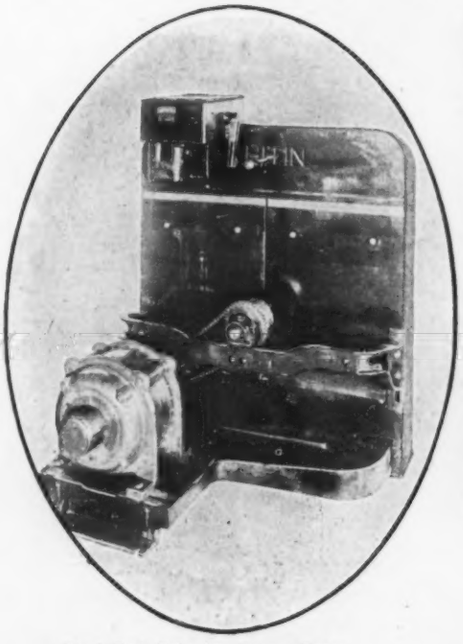
There are models and sizes to fill every requirement. Ask today for catalog 85.

**THE STANDARD SCALE & SUPPLY CO**

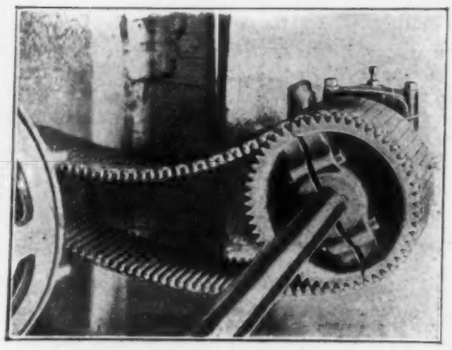
PITTSBURGH, 1631 Liberty Ave. PHILADELPHIA, 523 Arch St. CLEVELAND, 1547 Columbus Rd.
NEW YORK, 145 Chambers St. CHICAGO, 163-171 N. May St. BALTIMORE, 409 N. Gay St.

# MORSE CHAI

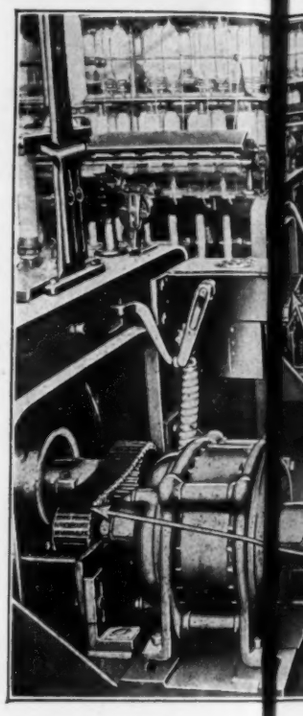
Flexible as a Belt



Head End Spinning Frame Drive.

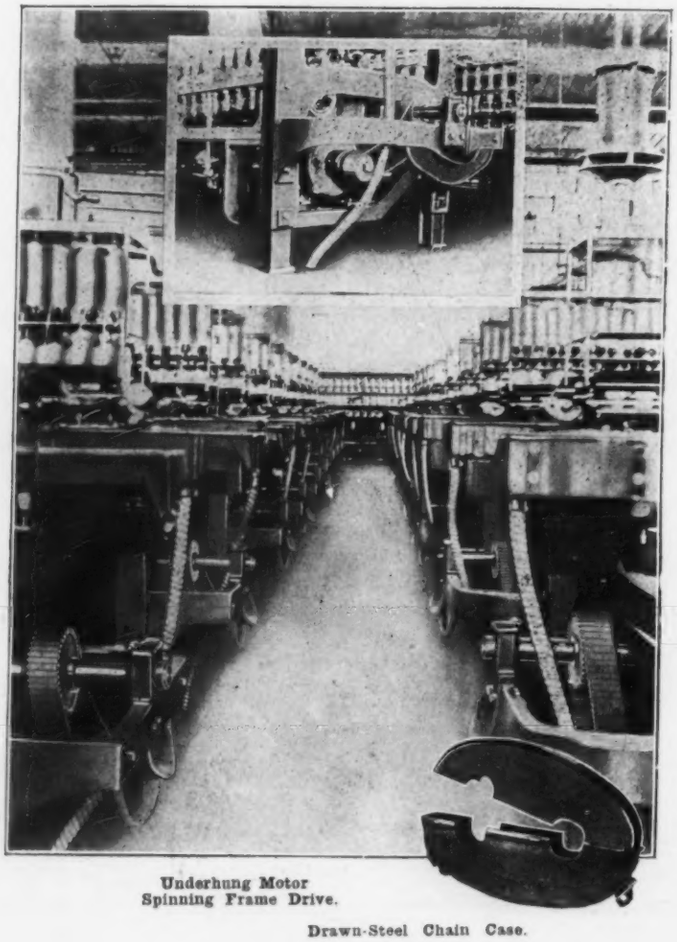


Typical Line Shaft Drive
Cotton Gin and Oil Mill.

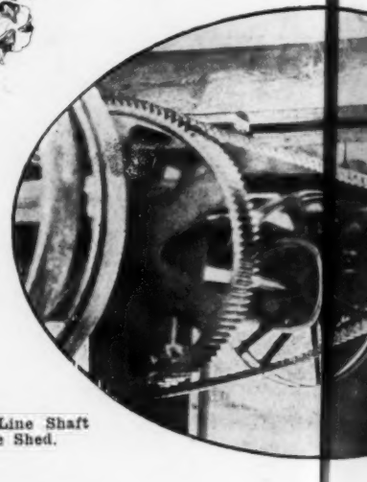


Standard Spinning
Chain ½" Pitch.

Durable and Long Life



Underhung Motor
Spinning Frame Drive.



Overhead Line Shaft
in Weave Shed.

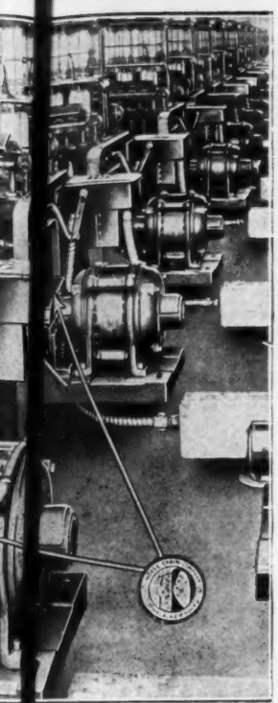
Drawn-Steel Chain Case.

*The Chain with*
*The Rocker Joint*
*and Center Guide.*

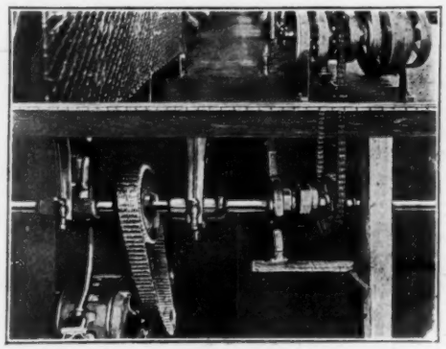
THE MORSE ROCKER JOINT

# ...NS *in* TEXTILES

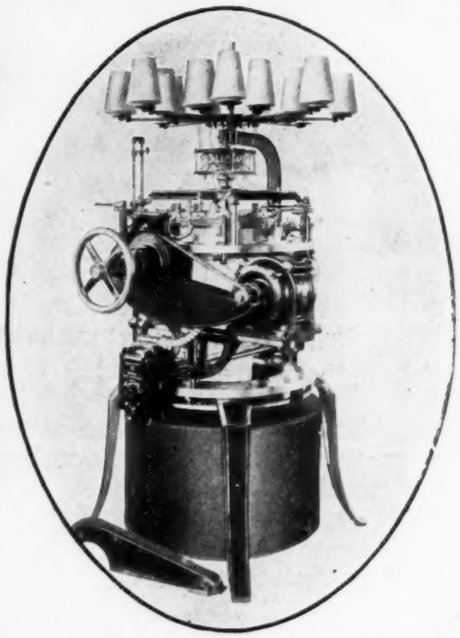
Positive as Gears



Spinning Frame
2½" wide, 8½" centers.

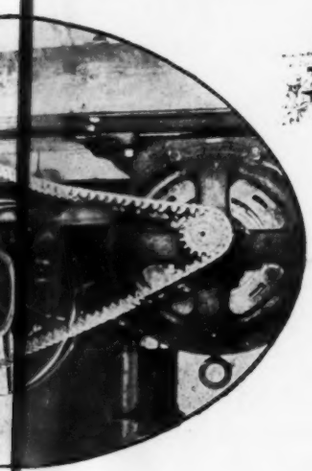


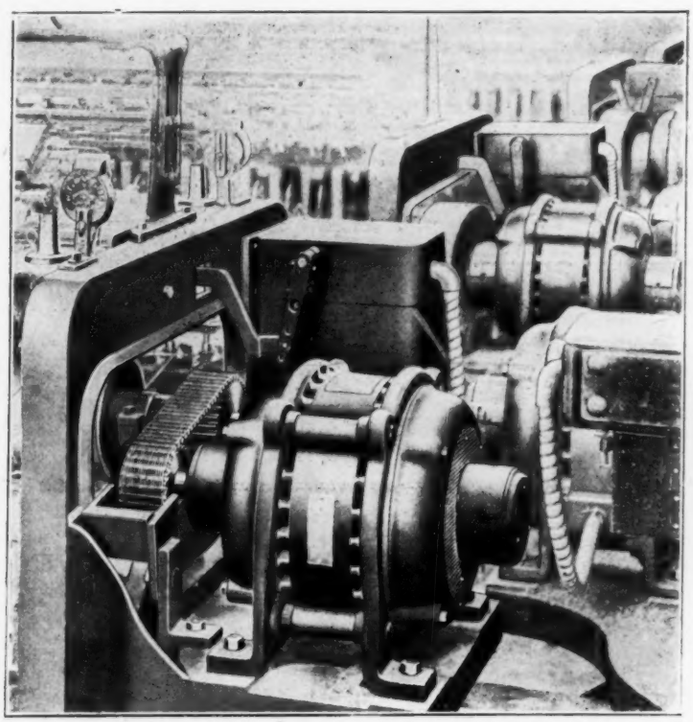
Motor to Line Shaft Under Floor
Through Floor to Twisters.



Individual Motor Drive to Knitting Machine

No Baths of Oil or Heating





Close Setting, Standard Spinning Frame Drive.

ENGINEERS PLANNING POWER TRANSMISSIONS

Secure Data and Estimates of "MORSE" DRIVES

SAVE Construction, Space, Light, Fuel. Producing More with Less

*No Flanges*
*No Oil Baths*

## MORSE CHAIN CO., ITHACA, N. Y.

Engineering Service, Assistance, Bulletins

Boston Detroit Pittsburgh Montreal
Chicago Greensboro, N. C. San Francisco Minneapolis
Cleveland New York Atlanta St. Louis

# Transmission Belting

## Rainbow

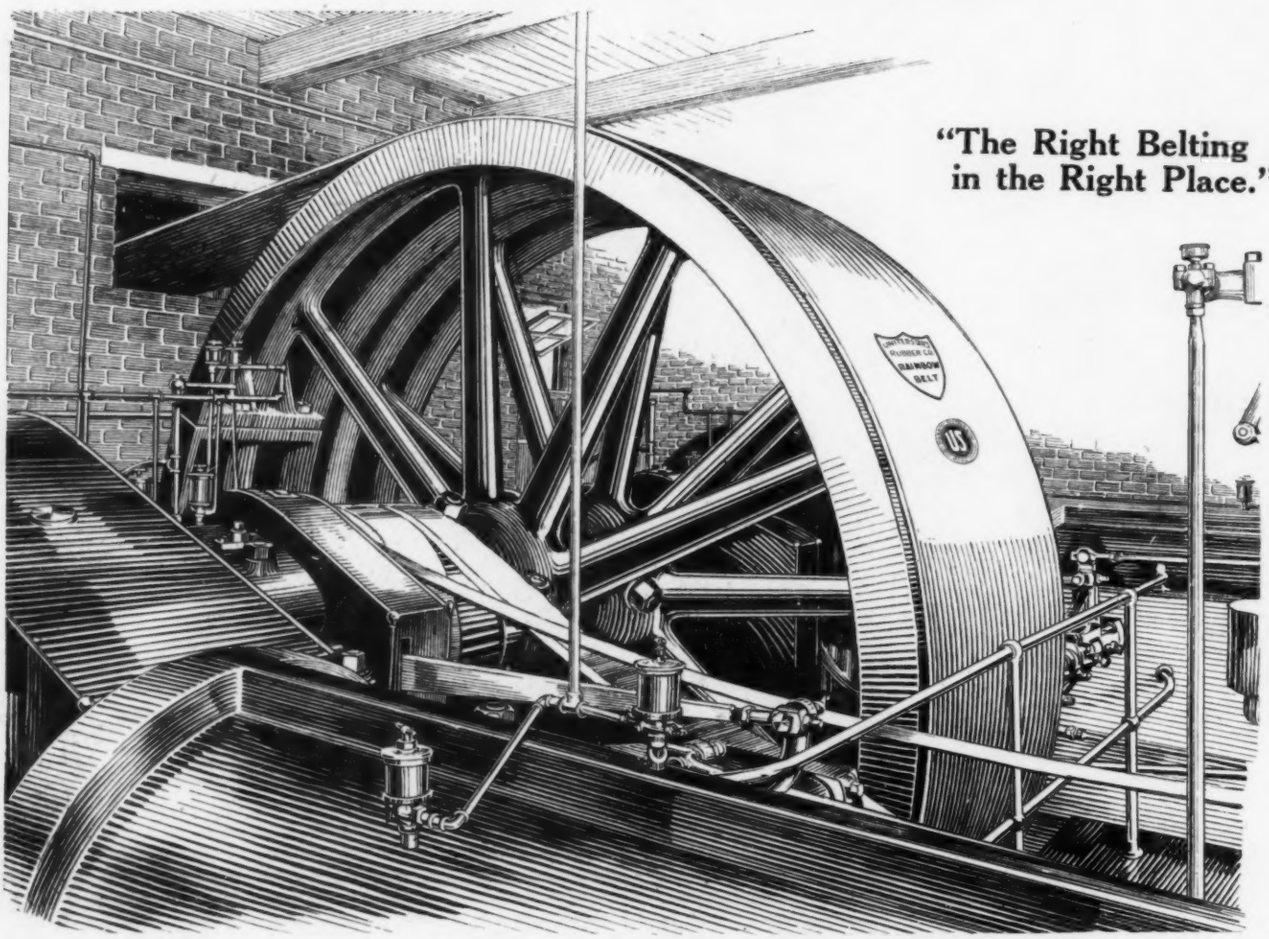
### Friction Surface Belting

The inbuilt strength and pulley-gripping power of Rainbow Belting make it the most dependable and economical on main drives.

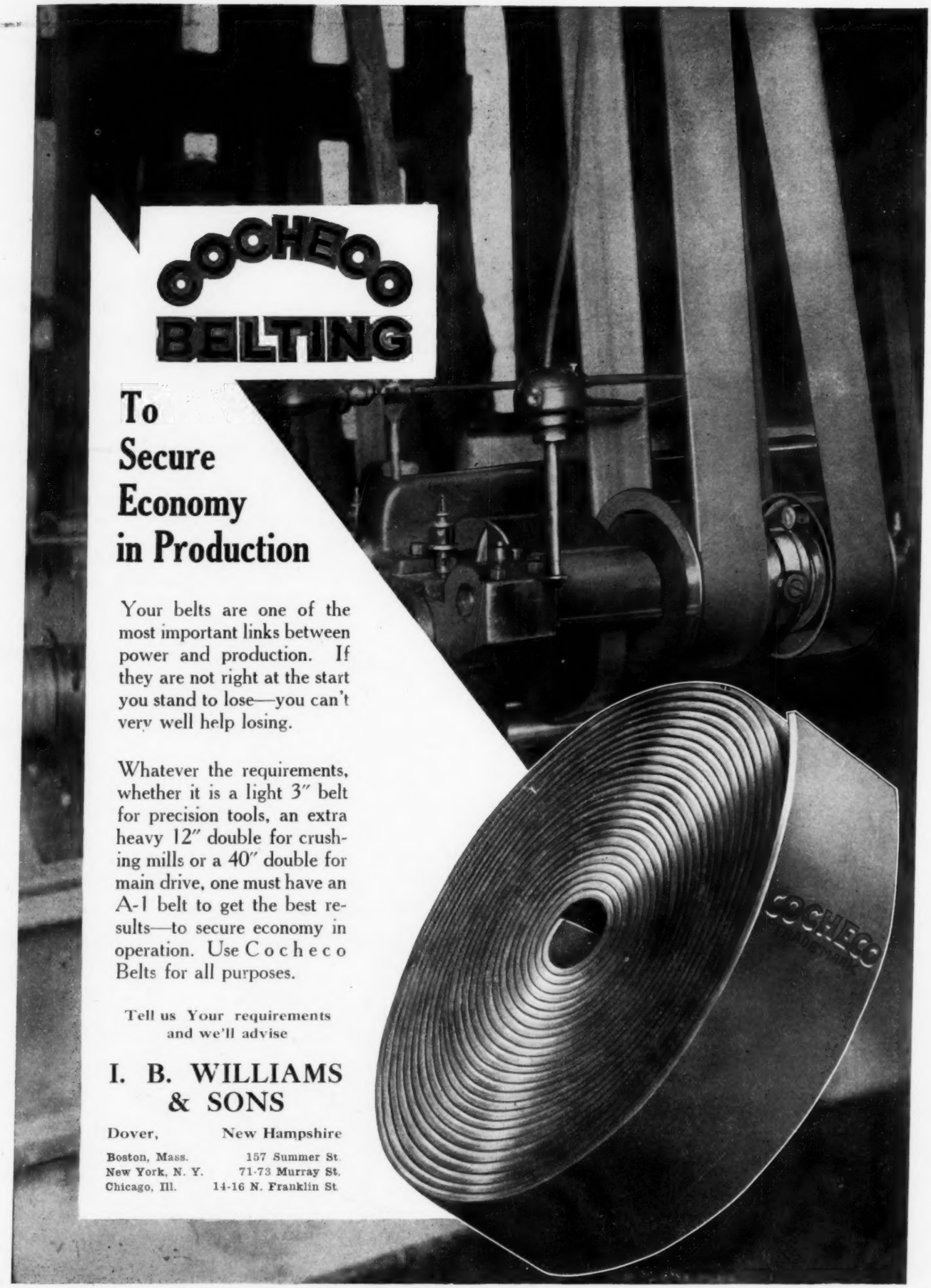
Its great flexibility makes it adaptable also for counter drives to Gin Stands, Fans, Linters, Hullers and Shakers; and on the small pulleys, idlers, and cross drives encountered in cotton mills.

Rainbow Belting, properly installed, means greater power economy.

## United States Rubber Company




"The Right Belting in the Right Place."




# To Secure Economy in Production

Your belts are one of the most important links between power and production. If they are not right at the start you stand to lose—you can't very well help losing.

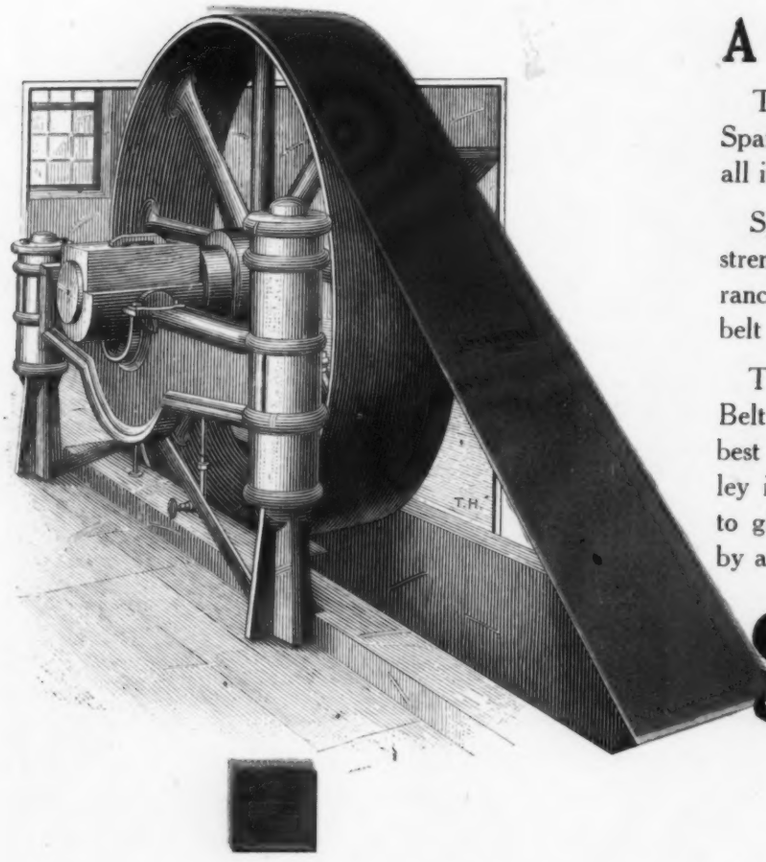
Whatever the requirements, whether it is a light 3″ belt for precision tools, an extra heavy 12″ double for crushing mills or a 40″ double for main drive, one must have an A-1 belt to get the best results—to secure economy in operation. Use Cocheco Belts for all purposes.

Tell us Your requirements and we'll advise

## I. B. WILLIAMS & SONS

Dover, New Hampshire

Boston, Mass. 157 Summer St.
New York, N. Y. 71-73 Murray St.
Chicago, Ill. 14-16 N. Franklin St.



# A Rugged Pulley-Gripper

There is nothing like leather for belting, and SparOak Leather Belting has peculiar advantages all its own.

SparOak is a two-in-one belt combining rugged strength with unique pulley-grip. Its great endurance and minimized slip make it a double-service belt of unusual qualities.

Two kinds of leather enter into a SparOak Belt. The outer ply is oak tanned, cut from the best selected center stock. The ply next the pulley is Graton & Knight Spartan leather, tanned to give pliability and traction power unequalled by any other material.

# SparOak Belting

Here is an 18" SparOak Belt on a hard drive in a warm, moist atmosphere where the extreme flexibility of Spartan and the firmness of Oak leather are necessary. SparOak is the answer to a great many perplexing belt problems, saving power and standing up under the most severe conditions.

If you have a troublesome belt drive, consult us as to what belt is required. Maybe it is SparOak, but in any event one of the Graton & Knight Standardized Series of Belts will fit exactly. Write for our booklet on Standardized Belting.

SparOak Belts grip from the start. During the weeks most new belts take to "work in," a SparOak Belt is giving full power and keeping production up to normal. And SparOak Belts keep on gripping for years under adverse conditions. They withstand repeated shifting, and the wear against step cone or flange pulleys. They render efficient service on drives with high speeds, small pulleys, and heavy loads. In short, any of the factors that quickly wear out ordinary belts affect SparOak belting amazingly little.

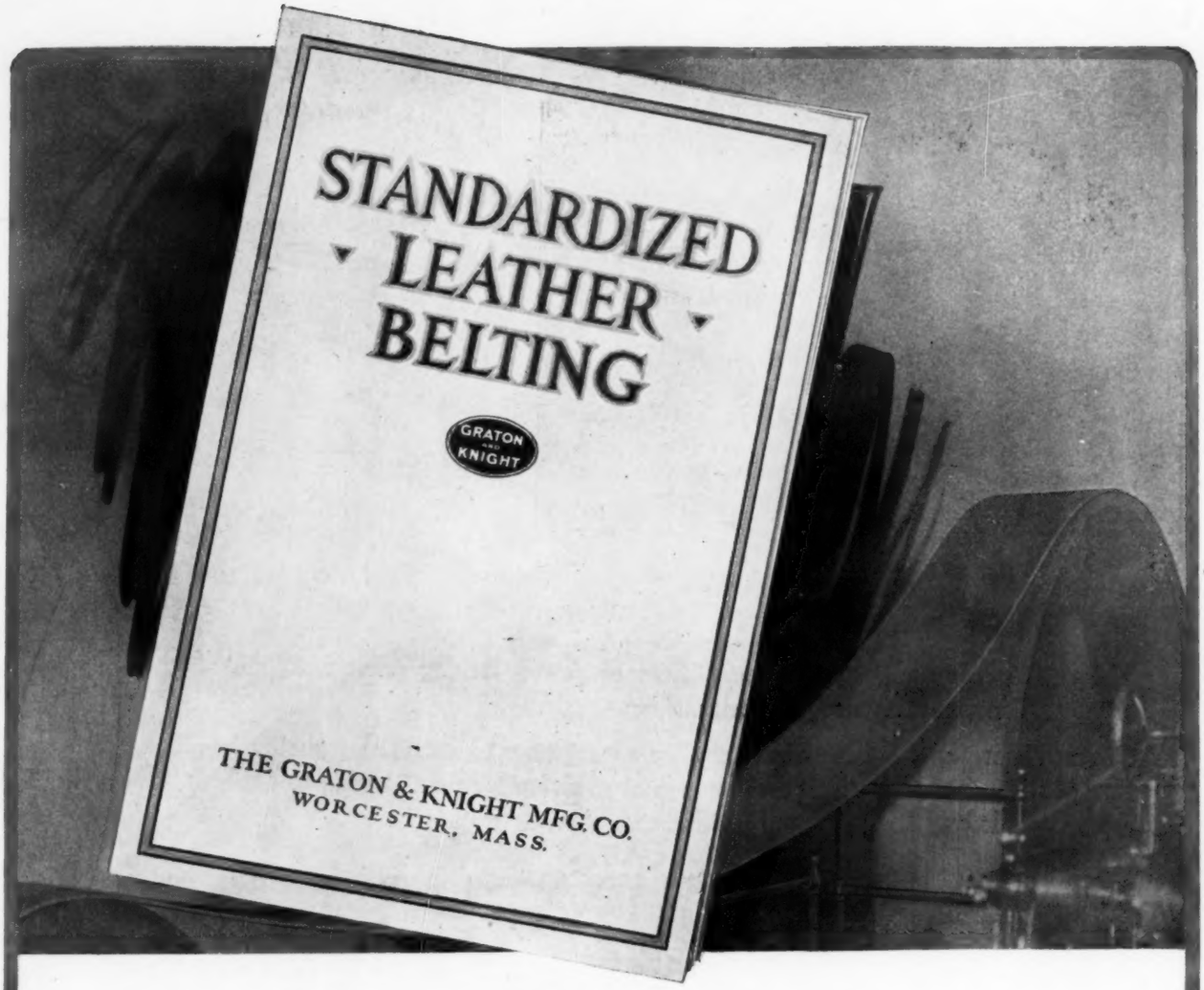
THE GRATON & KNIGHT MFG. CO.
Worcester, Mass., U. S. A

*Oak Leather Tanners, Makers of Leather Belting and Leather Products*

*Branches and Distributors in All Principal Cities*

# Graton & Knight
## Standardized Series
## Leather Belting

*Tanned by us for belting use*




## This Book Tells How

Here is a book that will help you to obtain actual belting economy in your Plant.

It is unusually complete with descriptions, recommendations, rules and tables which will enable you to quickly determine the scientifically correct belt for any given condition.

It explains Standardization as applied to Belting, tells you how to determine the right belt for the right place on the one true economical basis —the work to be done.

Write for it—we'll be glad to send it to you.

**The Graton & Knig htMfg.Co.**
**WORCESTER, MASS.**
**Oak Leather Tanners, Makers of Leather Belting and Leather Products.**

**Branches and Distributors in all Principal Cities.**

You may send the booklet STANDARDIZED LEATHER BELTING

TO .....

.....

.....

(C)

*"It is less costly to buy a good belt than to suffer from a poor one."*

The uncommon wearing and serving qualities of Jewell Belting result from skilled hands and an exact knowledge of belt making.

Our men know the fine points of belt making—know how to get utmost quality into belts of all kinds. Through all the processes of manufacture from tanning to finished product, skilled workmanship and untiring care give

# Jewell Belting

superior toughness, strength and pliability. Jewell Belts run true and save all created power in transmission. There's a Jewell Belt for every drive whether large or small. Jewell experts will co-operate with you in selecting the right belt for your purpose.

*Write us for full information.*

## Jewell Belting Co.

HARTFORD, CONNECTICUT.

**Chicago Branch:**
**2837 So. La Salle Street.**

**New York Office: 2 Rector Street.**

# Strom BEARINGS

THE consistent growth of our business and the present widespread and steadily increasing demand for Strom bearings is but the logical result of that high quality which has always been built into our products. This quality is being proved daily by the dependable service Strom bearings are giving as standard equipment in many lines of industry.

## U.S. Ball Bearing Mfg. Co.

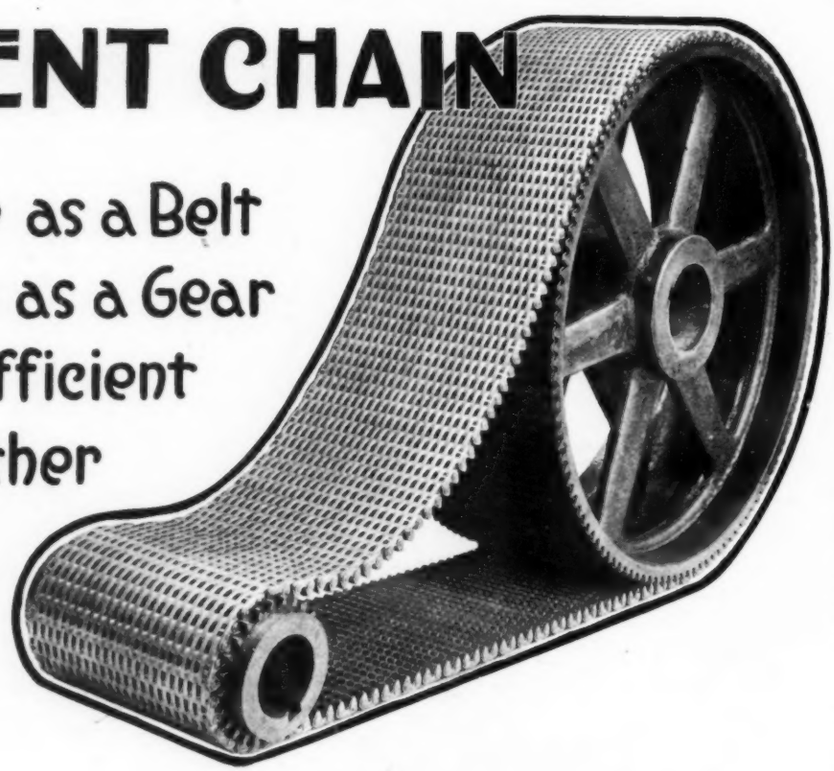
*(Conrad Patent Licensee)*

**Palmer Street and Kolmar Avenue, Chicago, Illinois**

# LINK-BELT

## SILENT CHAIN

Flexible as a Belt
Positive as a Gear
More efficient
than either

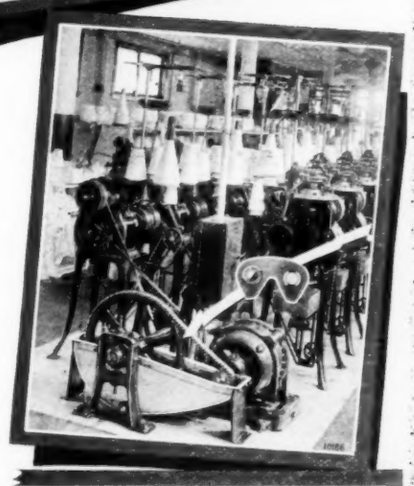


# Efficient Power Transmission

LINK-BELT Silent Chain Drives are the efficient means of transmitting power in Textile Mills.

They positively eliminate all slippage. The power is applied positively, but the flexibility of Link-Belt Silent Chain absorbs all shocks. The number of broken threads is reduced. This not only betters the product but adds to the life of the driven machine. The drive is smooth and steady.

Write for our Data Book No. 125 and Book No. 258, "The Ideal Drive for Textile Machinery".

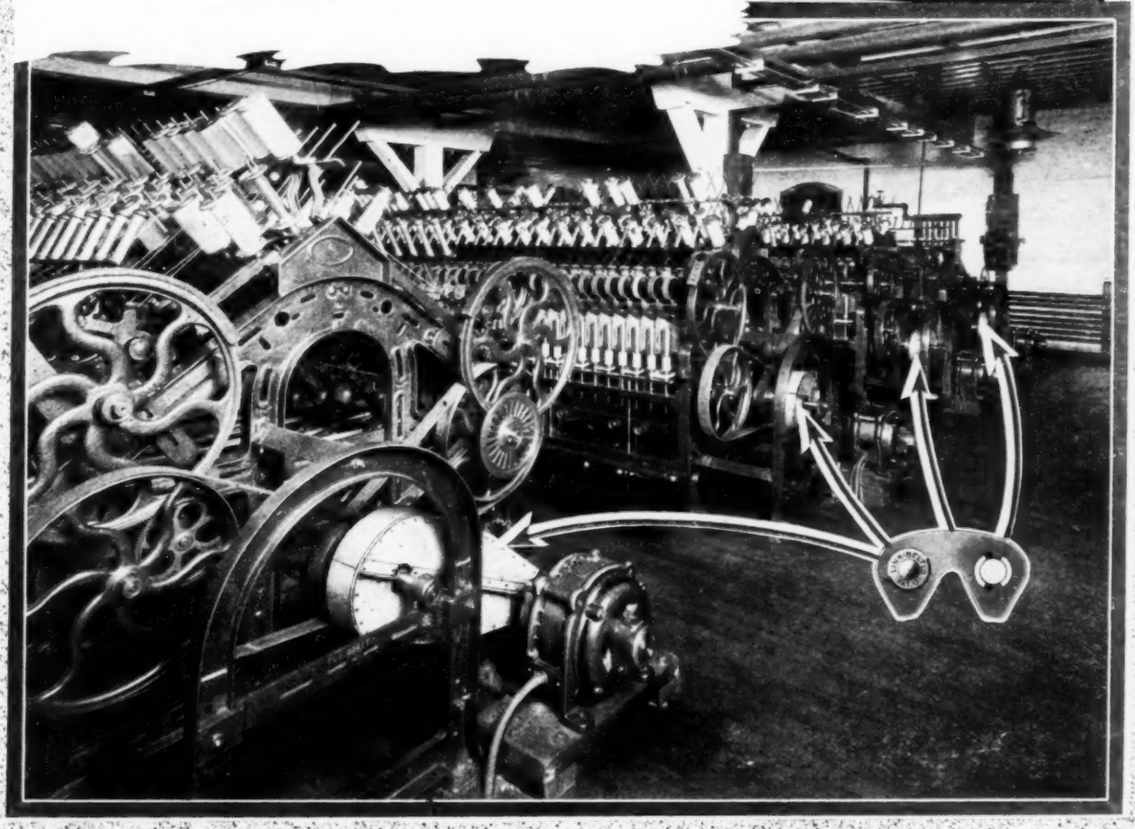


**LINK-BELT COMPANY**

PHILADELPHIA CHICAGO INDIANAPOLIS

**J. S. COTHRAN, Southern Agent,**
**Commercial Bank Bldg., Charlotte, N. C.**

Offices in Principal Cities 396



# ALL STEEL ECONOMY FIRE PROOF BALING PRESSES

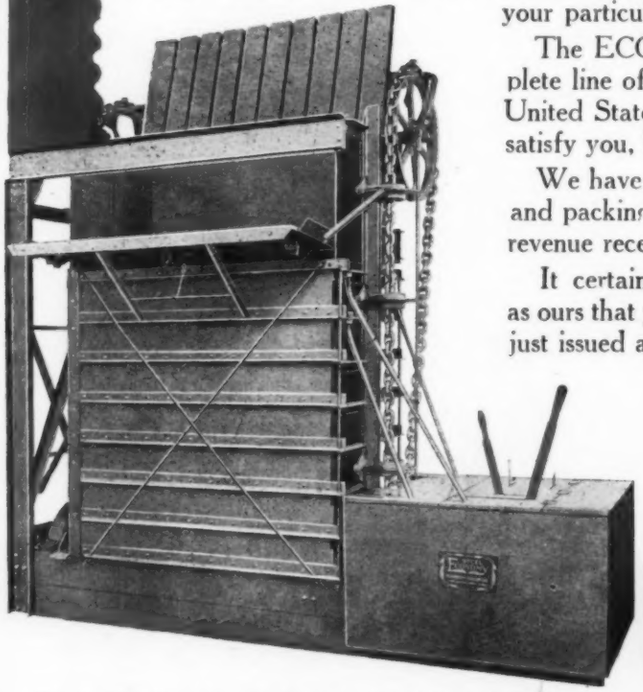
## A Press For Every Purpose

You are paying for an "Economy" Baler, whether you own one or not. The Economy is the baler that pays for itself in time, labor and storage space saved, and in better, more salable bales produced; it quickly pays back its own cost. You, therefore, pay for an Economy even while you do without it. Why not get yours and save money with it? Tell us the class and quantity of material you wish to bale, size and weight of bale desired, and we will recommend and quote on baler best adapted to meet your particular requirements.

The ECONOMY is the largest and most complete line of commercial baling presses built in the United States, and we believe we can more than satisfy you, both as to press and price.

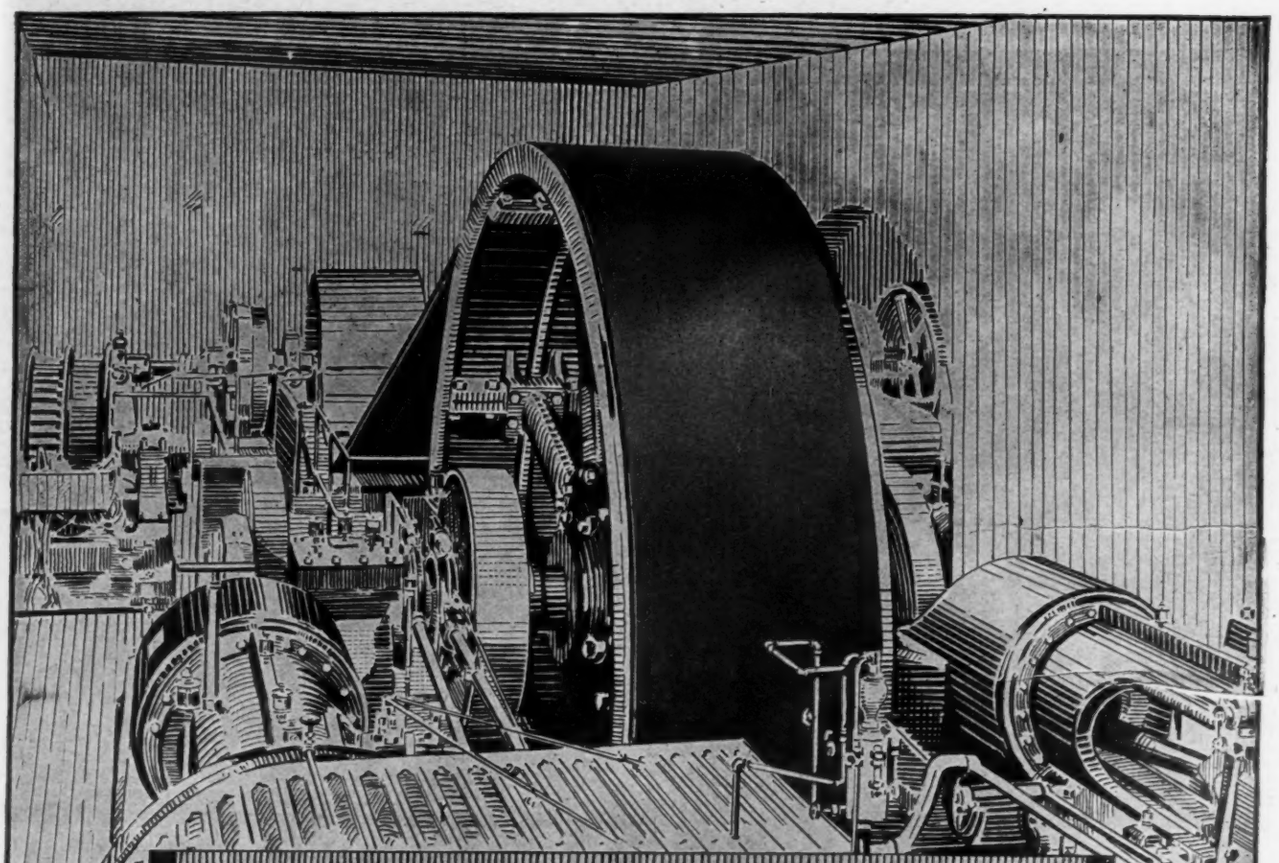
We have saved others immense sums in freight and packing costs, besides greatly increasing the revenue received from waste materials, etc.

It certainly is as much to your advantage as ours that you get our proposition. We have just issued a new general catalog, and will be glad to send same to you prepaid. Get one. Write today.



No. 60 with direct connected motor. Especially designed for baling cotton waste, etc.

ECONOMY BALER CO. Dept. C
Ann Arbor, Michigan



The only reason belting was ever manufactured down to a price instead of up to a standard, is that belt buyers demanded it.

Fortunately, buyers of that type are growing less in number year after year. The irresistible logic of facts is eliminating them.

Therefore, more money is being **invested** in high-duty belting and less money is being **wasted** in excessive costs of belting service—year after year.

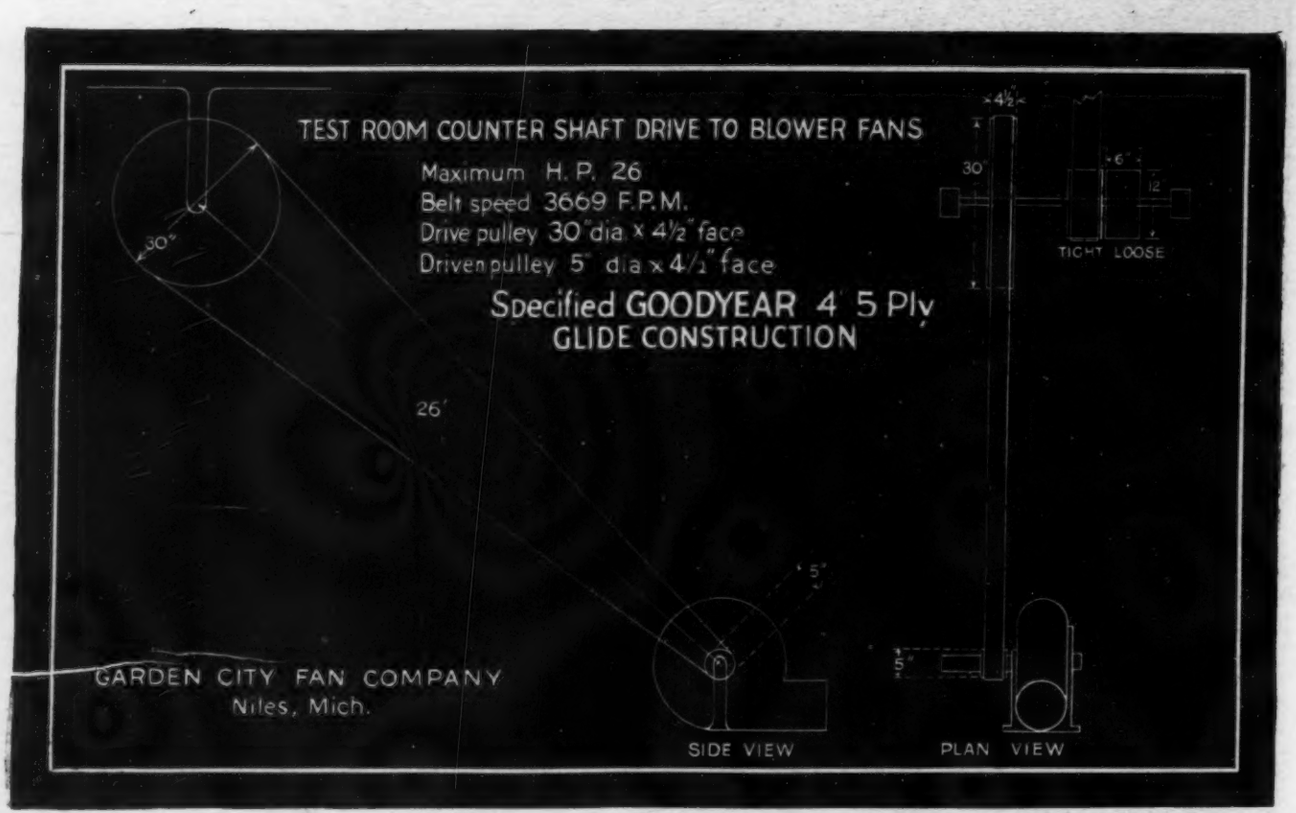
Which explains the steadily increasing demand for **"Turtle" Leather Belting**—which has always been made up to a standard, and never down to a price.

EDW. R. LADEW CO., INC.
GLEN COVE, NEW YORK, U.S.A.
Since 1835

Branches and Distributors in all Principal Cities of the World carry Complete Stocks. See your Phone Book for local address.

Ladew

A.P.-34




# Halving Price and Doubling Service—with the G. T. M.

***They used to pay $25.00*** for double belts that gave about a year of questionable service on a test block drive, off a countershaft, in the Garden City Fan Company's testing room. In June, 1917, they put on a Goodyear Belt specified by a G. T. M.—Goodyear Technical Man—for which they paid $12.50. It has already lasted two years, and is still in good condition. For half the price, they have had twice the service, and better service at that.

***Mr. H. C. Richards, the superintendent,*** had tried about every kind of belt on that drive. None of them had been satisfactory, mainly because the test block was not stationary and whenever a new fan was put on it to be tested out the workmen lined up the belt "by eye." The best double belts warped and curved because of this misalignment—and they slipped a lot, too. The cheap belts that he tried lasted about two months.

***When a G. T. M. called,*** Mr. Richards was very skeptical. He didn't think that much could be done toward reducing belt costs and troubles. But he thought he couldn't lose by trying—and he didn't.

***The 4-inch, 5-ply Goodyear Belt*** of Glide construction recommended by the G. T. M. has served for two years at a cost of $6.25 per year. The best costs obtained before were $25.00 a year. And there isn't any trouble at all. In spite of the frequent misalignment the Goodyear Belt still runs straight and true.

***After it had run only about six months,*** they were so pleased with the freedom from trouble it gave them, that they ordered another for a second testing drive just like it. And since then they have had a G. T. M. specify many other belts for them—ranging all the way from one and three quarter inches to eight inches wide.

***If you have a belt-devouring drive***—no matter how small or how large—ask the G. T. M. to call. He'll do it without charge when next he is in your vicinity. There are many G. T. M.'s—all with experience in many plants—all trained in the Goodyear Technical School—all experienced in selling belts to meet conditions and not as a grocer sells sugar. The G. T. M.'s services are free simply because the savings they effect for belt-users are so considerable that a gratifying volume of business is certain to come to us within a few years from the plant served—just as it has in the case of the Garden City Fan Company.

THE GOODYEAR TIRE & RUBBER COMPANY, AKRON, OHIO

BELTING • PACKING HOSE • VALVES

GOODYEAR

AKRON

**This trade mark on all metal goods**

**Your insurance against delayed production**

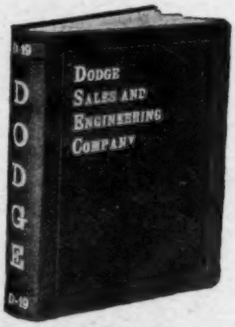
# Here is a metal pulley that will positively hold its shape and balance

Dodge Iron Split Pulleys are machine molded from metal patterns, carefully finished, faced on the rim and lacquered. Every pulley is absolutely round and in perfect balance before it leaves our shops.

Its shape and balance are permanent for cast iron is non-flexible. It is a split pulley and uses the bushing system.

In damp places, amid acid fumes, where a flywheel effect is desired, wood or steel pulleys are unsatisfactory. Under these conditions, the Dodge Standard Iron Split Pulley gives continuous, economical service.

Ask the Dodge dealer in your town to show you this pulley. You will appreciate its good qualities at a glance.




The new Dodge catalog should be in the hands of every power user. Send for your copy.

## Dodge Sales & Engineering Company

*Distributor of the products of the Dodge Mfg. Company*

**General Offices: Mishawaka, Ind. Works: Mishawaka, Ind. and Oneida, N. Y.**

**Dodge Branch Warehouses**

Philadelphia Cincinnati New York Chicago St Louis Boston
Atlanta Pittsburgh Minneapolis Dallas Providence Seattle Newark

Rim edges are fractured, then drawn together by bolts through rim lugs. A perfect joint.

# Roll

## of White Truck Fleets

YEAR after year this list *grows*. It is something more than a list of well-known concerns owning ten or more White Trucks. It represents a *yearly progress in added trucks per owner*—the most extensive growth of individual fleets ever published by a truck maker.

The buyer of one or many trucks can have no better guide than the experience of those whose trucking volume affords a comparative knowledge of results.

There are now 2,774 fleets in active service, totaling 33,139 White Trucks, exclusive of all single truck installations.

The last column includes only the first three months of 1919

| | 1910 | 1911 | 1912 | 1913 | 1914 | 1915 | 1916 | 1917 | To-day |
|---|---|---|---|---|---|---|---|---|---|
| Abraham & Straus | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 10 |
| Air Nitrates Corporation | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 |
| All Russia Zemsky & Cities Union | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 10 | 10 |
| B. Altman & Company | 0 | 0 | 8 | 8 | 33 | 67 | 92 | 92 | 93 |
| Aluminum Co. of America Interests | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 16 | 20 |
| American Ambulance Field Service | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 22 | 26 |
| American Can Company | 0 | 0 | 4 | 7 | 8 | 8 | 33 | 56 | 66 |
| American Petroleum Company | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 26 |
| American Railway Express Cos. | 0 | 0 | 3 | 14 | 23 | 27 | 88 | 98 | 111 |
| American Red Cross Society | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 86 | 122 |
| American Steel & Wire Company | 0 | 0 | 1 | 5 | 5 | 6 | 10 | 16 | 20 |
| American Stores Company | 0 | 1 | 2 | 9 | 14 | 14 | 15 | 29 | 37 |
| American War Relief Clearing House | 0 | 0 | 0 | 0 | 0 | 2 | 18 | 32 | 32 |
| Ammen Transportation Company | 0 | 0 | 2 | 7 | 8 | 9 | 11 | 11 | 32 |
| Anheuser-Busch Brewing Ass'n | 0 | 0 | 0 | 0 | 0 | 1 | 17 | 19 | 19 |
| Arlington Mills | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 11 | 12 |
| Armour & Company | 0 | 4 | 30 | 51 | 63 | 84 | 165 | 226 | 259 |
| Associated Bell Telephone Cos. | 0 | 1 | 6 | 30 | 46 | 84 | 311 | 447 | 477 |
| Associated Dry Goods Corporation | 0 | 0 | 8 | 13 | 23 | 29 | 37 | 40 | 88 |
| City of Atlanta | 0 | 3 | 6 | 8 | 10 | 10 | 11 | 11 | 15 |
| Atlanta Baggage & Cab Co. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 10 |
| Atlantic Ice & Coal Corporation | 0 | 0 | 0 | 15 | 15 | 15 | 20 | 27 | 34 |
| Atlantic Refining Company | 1 | 4 | 9 | 31 | 67 | 86 | 184 | 275 | 374 |
| Auto Livery Company | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 15 | 15 |
| The Bailey Company | 0 | 1 | 3 | 6 | 6 | 13 | 16 | 17 | 20 |
| City of Baltimore | 0 | 3 | 4 | 7 | 14 | 14 | 29 | 30 | 31 |
| Baltimore Transit Company | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 20 | 20 |
| The Barrett Company | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 17 | 19 |
| Bellevue & Allied Hospitals | 0 | 0 | 0 | 1 | 3 | 9 | 15 | 19 | 19 |
| Stedman Bent | 0 | 0 | 0 | 0 | 0 | 1 | 19 | 23 | 23 |
| Best & Company | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| William Bingham Company | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 17 | 20 |
| Samuel Bingham's Sons Mfg. Co. | 0 | 0 | 2 | 3 | 4 | 4 | 6 | 10 | 10 |
| Bloomingdale Brothers | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| Boggs & Buhl, Inc. | 0 | 8 | 10 | 18 | 23 | 24 | 24 | 24 | 23 |
| Bohlen-Huse Coal & Ice Co. | 0 | 0 | 5 | 7 | 7 | 7 | 7 | 7 | 10 |
| Henry Bosch Company | 2 | 8 | 8 | 9 | 10 | 10 | 11 | 12 | 12 |
| City of Boston | 0 | 2 | 9 | 12 | 17 | 18 | 18 | 19 | 22 |
| Boulevard Transportation Co. | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 13 | 13 |
| Bradford Baking Company | 0 | 0 | 0 | 9 | 20 | 25 | 26 | 26 | 26 |
| The Brandt Company | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 10 | 25 |
| Broadway Taxi Operating Co. | 0 | 3 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Brooklyn Alcatraz Asphalt Co. | 0 | 0 | 0 | 2 | 9 | 9 | 11 | 11 | 11 |
| Bry-Block Mercantile Co. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| P. H. Butler Company | 0 | 0 | 0 | 1 | 1 | 4 | 6 | 11 | 12 |
| H. M. Byllesby & Co., Inc. | 0 | 1 | 2 | 2 | 2 | 3 | 5 | 11 | 17 |
| Caddo Parish, Louisiana | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 13 |
| California Baking Company | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 17 |
| Carolina Public Service Co. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 12 |
| Chapin-Sacks Manufacturing Co. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 21 |
| Chero-Cola Bottling Companies | 0 | 0 | 0 | 0 | 4 | 6 | 30 | 62 | 96 |
| City of Chicago | 0 | 0 | 0 | 1 | 4 | 10 | 27 | 38 | 47 |
| Chicago Fire Insurance Board | 0 | 0 | 5 | 11 | 13 | 13 | 13 | 13 | 13 |

| | 1910 | 1911 | 1912 | 1913 | 1914 | 1915 | 1916 | 1917 | To-day |
|---|---|---|---|---|---|---|---|---|---|
| Cities Service Co. Interests | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 13 | 13 |
| Clark's Bus Line | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 12 |
| Clearing House Parcel Delivery Co. | 0 | 0 | 0 | 0 | 0 | 3 | 10 | 10 | 14 |
| City of Cleveland | 0 | 2 | 7 | 14 | 15 | 19 | 23 | 32 | 36 |
| Cleveland-Akron Bag Company | 6 | 7 | 9 | 14 | 15 | 19 | 21 | 39 | 45 |
| Cleveland Builders Supply Co. | 0 | 1 | 1 | 3 | 4 | 7 | 10 | 14 | 19 |
| Cleveland Electric Illuminating Co. | 0 | 0 | 0 | 0 | 0 | 6 | 17 | 23 | 23 |
| Cleveland Provision Company | 0 | 1 | 2 | 3 | 7 | 7 | 11 | 13 | 15 |
| Cleveland Transfer Company | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 19 | 19 |
| Cleveland & Sandusky Brewing Co. | 0 | 0 | 1 | 1 | 2 | 3 | 10 | 15 | 17 |
| Club Cab Corporation | 0 | 0 | 0 | 0 | 0 | 21 | 25 | 25 | 25 |
| Coca-Cola Bottling Companies | 0 | 3 | 6 | 12 | 26 | 38 | 75 | 122 | 179 |
| Consol. Gas, El. Light & Power Co. | 2 | 3 | 6 | 8 | 11 | 12 | 12 | 12 | 12 |
| Consolidated Rendering Co. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 7 |
| Continental Oil Company | 0 | 1 | 2 | 2 | 3 | 4 | 19 | 25 | 34 |
| Cuban Government | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| Cudahy Packing Company | 0 | 0 | 2 | 6 | 8 | 10 | 21 | 24 | 27 |
| Culbertson Bros. Company | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 8 | 12 |
| Dannemiller Grocery Co. | 0 | 0 | 0 | 0 | 0 | 3 | 6 | 12 | 12 |
| James DeMallie | 0 | 0 | 0 | 0 | 1 | 1 | 16 | 16 | 16 |
| Dominion of Canada | 0 | 0 | 0 | 0 | 43 | 43 | 43 | 43 | 43 |
| Dunn & Ruth | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 24 | 25 |
| E. I. DuPont de Nemours Pdr. Co. | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 16 | 20 |
| East Ohio Gas Company | 0 | 0 | 0 | 1 | 3 | 5 | 5 | 10 | 11 |
| Eastern Torpedo Company | 0 | 0 | 0 | 1 | 3 | 3 | 3 | 5 | 16 |
| T. Eaton Company, Ltd. | 0 | 5 | 13 | 14 | 15 | 15 | 20 | 20 | 20 |
| Emerick Motor Bus Company | 0 | 0 | 0 | 1 | 5 | 9 | 11 | 14 | 16 |
| Empire Gas & Fuel Co. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 61 |
| Owen H. Fay Livery Company | 0 | 0 | 0 | 23 | 23 | 23 | 23 | 24 | 24 |
| Fenway Garage Company | 0 | 0 | 19 | 19 | 29 | 29 | 39 | 39 | 30 |
| Firestone Tire & Rubber Co. | 0 | 0 | 0 | 1 | 1 | 2 | 6 | 12 | 16 |
| Fly & Hobson Company | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 13 |
| Foster & Kleiser, Inc. | 0 | 2 | 4 | 4 | 8 | 10 | 10 | 10 | 10 |
| Harry V. Franks | 0 | 0 | 6 | 0 | 0 | 0 | 6 | 16 | 16 |
| Frederick & Nelson, Inc. | 0 | 0 | 0 | 3 | 7 | 9 | 10 | 13 | 18 |
| Freedom Oil Works Company | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| General Baking Company | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 10 | 25 |
| General Petroleum Company | 0 | 0 | 0 | 1 | 0 | 2 | 4 | 8 | 15 |
| Georgia Fruit Exchange | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 37 |
| Georgia Railway & Power Co. | 0 | 0 | 1 | 3 | 7 | 7 | 18 | 22 | 24 |
| Gilman Motor Trucking Co. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 10 |
| Gimbel Brothers | 0 | 20 | 26 | 46 | 59 | 59 | 62 | 62 | 78 |
| Glacier Park Transportation Co. | 0 | 0 | 0 | 0 | 10 | 20 | 22 | 23 | 23 |
| Adolf Gobel, Inc. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 30 |
| J. Goldsmith & Sons Co. | 0 | 0 | 3 | 4 | 5 | 5 | 7 | 12 | 12 |
| B. F. Goodrich Company | 4 | 6 | 9 | 11 | 12 | 17 | 19 | 22 | 25 |
| Goodyear Tire & Rubber Co. | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 10 | 15 |
| Gray Construction Company | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 10 | 12 |
| Great Northern Paper Company | 0 | 0 | 0 | 1 | 1 | 11 | 13 | 18 | 18 |
| Greenfield Elec. Light & Power Co. | 0 | 3 | 6 | 9 | 10 | 11 | 13 | 13 | 14 |
| Gulf Refining Company | 0 | 1 | 9 | 29 | 81 | 172 | 463 | 563 | 663 |
| Halle Brothers Company | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 13 | 13 |
| Haverty Furniture Company | 0 | 0 | 0 | 0 | 2 | 6 | 7 | 12 | 18 |

# Call
## In Actual Service

| | 1910 | 1911 | 1912 | 1913 | 1914 | 1915 | 1916 | 1917 | To-day |
|---|---|---|---|---|---|---|---|---|---|
| Hawaii County, T. H. | 0 | 0 | 2 | 9 | 9 | 9 | 10 | 11 | 16 |
| H. J. Heinz Company | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 19 | 26 |
| The Higbee Company | 2 | 4 | 5 | 6 | 10 | 10 | 10 | 12 | 12 |
| Hochschild, Kohn & Co. | 0 | 1 | 3 | 5 | 6 | 8 | 10 | 9 | 12 |
| Joseph Horne Company | 5 | 12 | 15 | 24 | 33 | 39 | 47 | 47 | 42 |
| J. L. Hudson Company | 0 | 0 | 0 | 0 | 0 | 10 | 17 | 20 | 20 |
| Huebner Toledo Breweries Co. | 0 | 0 | 0 | 0 | 0 | 1 | 6 | 8 | 11 |
| E. V. Hull | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 11 |
| Humble Oil & Refining Co. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| Imperial Oil Company, Ltd. | 0 | 1 | 1 | 1 | 1 | 1 | 12 | 42 | 43 |
| Independent Brewing Co. of Pgh. | 1 | 1 | 2 | 5 | 5 | 11 | 28 | 36 | 42 |
| Jones Store Company | 0 | 2 | 2 | 5 | 6 | 10 | 14 | 17 | 17 |
| Kaufmann Dept. Stores, Inc. | 0 | 0 | 10 | 16 | 24 | 44 | 80 | 80 | 66 |
| Kaufmann & Baer Company | 0 | 0 | 0 | 1 | 40 | 45 | 51 | 59 | 60 |
| Edward F. Kelly | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 15 |
| C. D. Kenny Company | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 41 | 45 |
| Henry Knight & Son | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 10 |
| Theodor Kundtz Company | 3 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 17 |
| J. William Lee & Son | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 13 | 13 |
| Fred T. Ley & Company | 0 | 0 | 0 | 0 | 1 | 1 | 4 | 10 | 13 |
| Leyte Land Transportation Co. | 0 | 0 | 3 | 6 | 10 | 12 | 14 | 14 | 14 |
| Liberty Baking Company | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 15 |
| Lit Brothers | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 26 | 27 |
| Loose-Wiles Biscuit Company | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 11 |
| Los Angeles Brewing Company | 0 | 0 | 2 | 7 | 13 | 14 | 15 | 17 | 17 |
| Los Angeles Ice & Cold Storage Co. | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 10 | 10 |
| Henry C. Lytton & Sons (The Hub) | 0 | 6 | 7 | 9 | 10 | 11 | 11 | 12 | 12 |
| McCreery & Company | 6 | 6 | 8 | 8 | 8 | 11 | 15 | 15 | 15 |
| G. M. McKelvey Company | 0 | 0 | 1 | 1 | 6 | 8 | 18 | 18 | 18 |
| R. H. Macy & Company | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 15 | 15 |
| Mandel Brothers | 0 | 9 | 10 | 15 | 16 | 17 | 17 | 17 | 17 |
| City of Manila | 0 | 0 | 3 | 3 | 3 | 7 | 8 | 11 | 11 |
| A. C. Marshall Company | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 15 |
| State of Massachusetts | 0 | 1 | 4 | 4 | 4 | 5 | 11 | 11 | 11 |
| The May Company | 0 | 0 | 0 | 4 | 11 | 15 | 26 | 26 | 27 |
| Mesaba Transportation Company | 0 | 0 | 0 | 0 | 0 | 2 | 15 | 18 | 20 |
| Michelin Tire Company | 0 | 1 | 2 | 3 | 3 | 9 | 11 | 11 | 11 |
| C. W. Miller Transfer Company | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| H. W. Mollenauer & Brother | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 10 |
| City of Nashville | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 3 | 12 |
| National Casket Company | 0 | 0 | 2 | 10 | 14 | 15 | 19 | 21 | 24 |
| Province of New Brunswick | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 20 | 20 |
| State of New Jersey | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 6 | 16 |
| State of New York | 0 | 0 | 3 | 3 | 3 | 5 | 29 | 37 | 37 |
| City of New York | 0 | 1 | 7 | 11 | 12 | 13 | 13 | 13 | 13 |
| N. Y. Board of Fire Underwriters | 0 | 0 | 2 | 6 | 8 | 16 | 20 | 20 | 20 |
| New York State Railways | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 10 | 10 |
| Province of Nova Scotia | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| Ohio Oil Company | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| Omaha Taxicab Company | 0 | 0 | 0 | 0 | 6 | 8 | 17 | 17 | 17 |
| Onondaga County, N. Y. | 0 | 0 | 0 | 0 | 1 | 3 | 5 | 10 | 16 |
| Oppenheim, Collins & Company | 0 | 0 | 0 | 0 | 20 | 21 | 27 | 27 | 30 |
| Pacific Mills | 0 | 0 | 3 | 4 | 4 | 7 | 12 | 14 | 17 |
| Frank Parmelee Company | 0 | 0 | 0 | 9 | 9 | 13 | 28 | 28 | 28 |
| Peninsula Rapid Transit Co. | 0 | 0 | 0 | 0 | 0 | 7 | 8 | 15 | 19 |
| State of Pennsylvania | 0 | 0 | 0 | 0 | 1 | 2 | 5 | 15 | 15 |
| Philadelphia Electric Company | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 15 | 18 |
| Pierce Oil Corporation | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 23 |
| Pike's Peak Auto Highway Co. | 0 | 0 | 0 | 0 | 0 | 12 | 15 | 15 | 16 |
| City of Pittsburgh | 0 | 2 | 9 | 14 | 14 | 15 | 15 | 15 | 15 |
| H. & S. Pogue Company | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 12 |
| Portland Sebago Ice Company | 0 | 0 | 0 | 0 | 2 | 4 | 5 | 5 | 11 |
| Prairie Oil & Gas Company | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 26 |
| Progressive Transfer Company | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36 |
| Pullman Taxicab Company | 0 | 0 | 0 | 0 | 10 | 10 | 31 | 31 | 43 |
| Quaker City Cab Company | 0 | 0 | 0 | 0 | 0 | 0 | 75 | 100 | 100 |
| Remar Company | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| Rieck-McJunkin Dairy Co. | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 16 | 23 |
| Riverside Taxi Service Co. | 0 | 0 | 0 | 0 | 5 | 15 | 15 | 15 | 15 |
| Rocky Mountain Park Transp. Co. | 0 | 0 | 2 | 2 | 3 | 3 | 21 | 23 | 33 |
| The Rosenbaum Company | 1 | 1 | 2 | 11 | 12 | 33 | 39 | 43 | 40 |
| Thomas J. Ryan | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 13 | 13 |
| City of St. Louis | 0 | 0 | 0 | 0 | 4 | 6 | 9 | 10 | 14 |
| Saks & Company | 0 | 0 | 0 | 0 | 10 | 10 | 10 | 10 | 10 |
| Salt Lake Transportation Co. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 15 |
| San Bernardino M't'n Auto Line | 0 | 1 | 3 | 4 | 6 | 6 | 9 | 14 | 15 |
| City of San Francisco | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 3 | 10 |
| San Francisco Drayage Co. | 0 | 0 | 0 | 0 | 1 | 3 | 10 | 10 | 10 |
| Schmidt & Ziegler, Ltd. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 11 |
| Andrew Schoch Grocery Co. | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 11 | 11 |
| Schulze Baking Company | 1 | 1 | 9 | 15 | 17 | 22 | 23 | 26 | 31 |
| Seiple & Wolf | 0 | 0 | 0 | 1 | 2 | 2 | 10 | 10 | 10 |
| Franklin Simon & Company | 0 | 0 | 0 | 3 | 6 | 10 | 14 | 14 | 17 |
| W. & J. Sloane | 13 | 14 | 15 | 15 | 15 | 17 | 21 | 23 | 23 |
| Smith & Hicks, Inc. | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 13 | 13 |
| Spear & Company | 0 | 0 | 1 | 9 | 13 | 14 | 15 | 22 | 23 |
| Standard Oil Co. of California | 1 | 3 | 4 | 6 | 7 | 26 | 67 | 97 | 111 |
| Standard Oil Co. of Indiana | 1 | 4 | 5 | 9 | 59 | 122 | 168 | 201 | 214 |
| Standard Oil Co. of Kentucky | 0 | 1 | 2 | 4 | 5 | 9 | 38 | 75 | 121 |
| Standard Oil Co. of Louisiana | 0 | 1 | 1 | 1 | 1 | 1 | 2 | 5 | 53 |
| Standard Oil Co. of Nebraska | 0 | 0 | 0 | 0 | 5 | 11 | 17 | 17 | 17 |
| Standard Oil Co. of New Jersey | 0 | 0 | 1 | 1 | 1 | 1 | 3 | 30 | 65 |
| Standard Oil Co. of New York | 2 | 6 | 18 | 35 | 68 | 113 | 230 | 363 | 450 |
| Standard Oil Co. of Ohio | 0 | 1 | 1 | 1 | 10 | 17 | 28 | 36 | 42 |
| Standard Sanitary Mfg. Co. | 0 | 0 | 2 | 3 | 3 | 4 | 4 | 6 | 10 |
| Stark-Tuscarawas Brewing Co. | 0 | 0 | 0 | 1 | 1 | 2 | 7 | 12 | 12 |
| Sterling & Welch Company | 2 | 4 | 7 | 7 | 8 | 8 | 11 | 14 | 14 |
| Stern Brothers | 0 | 0 | 8 | 18 | 18 | 19 | 21 | 22 | 22 |
| Stewart Taxi Service Company | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 29 | 43 |
| Stone & Webster Interests | 0 | 1 | 1 | 1 | 2 | 2 | 8 | 24 | 31 |
| Strawbridge & Clothier | 0 | 0 | 0 | 2 | 4 | 4 | 9 | 15 | 15 |
| Stroehmann's Vienna Bakery | 0 | 0 | 0 | 2 | 2 | 2 | 10 | 10 | 11 |
| Swift & Company | 0 | 0 | 0 | 2 | 2 | 10 | 101 | 109 | 127 |
| Tacoma Bottling Works | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 10 |
| The Taxi Company | 0 | 0 | 0 | 0 | 2 | 4 | 13 | 13 | 14 |
| Taxicab Association, Inc. | 0 | 0 | 0 | 26 | 40 | 76 | 151 | 151 | 151 |
| Telling-Belle Vernon Company | 0 | 3 | 4 | 4 | 9 | 11 | 11 | 13 | 20 |
| Terminal Taxicab Company | 0 | 0 | 20 | 36 | 61 | 61 | 61 | 82 | 82 |
| The Texas Company | 0 | 0 | 0 | 0 | 0 | 9 | 11 | 11 | 11 |
| Twin City Motor Bus Co. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| Union Carbide & Carbon Co. Int's | 1 | 1 | 1 | 2 | 3 | 6 | 16 | 18 | 21 |
| Union Oil Company of California | 0 | 0 | 0 | 1 | 10 | 22 | 43 | 156 | 216 |
| Union Transfer Company | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 11 | 12 |
| United Gas Imp't Co. Interests | 0 | 0 | 0 | 2 | 8 | 15 | 41 | 64 | 64 |
| United States Baking Co. | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 11 | 14 |
| United States Rubber Co. | 0 | 0 | 0 | 1 | 2 | 5 | 5 | 9 | 14 |
| U. S. Post Office Department | 0 | 0 | 0 | 21 | 27 | 104 | 132 | 298 | 445 |
| U. S. Steel Corporation Interests | 0 | 0 | 1 | 1 | 2 | 3 | 5 | 12 | 17 |
| E. H. Vare | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 11 |
| F. G. Vogt & Sons, Inc. | 0 | 0 | 0 | 1 | 2 | 3 | 5 | 12 | 14 |
| Wall Street Taxicab Company | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 19 | 19 |
| John Wanamaker | 0 | 0 | 0 | 0 | 0 | 6 | 27 | 37 | 37 |
| Ward Baking Company | 0 | 0 | 0 | 0 | 0 | 12 | 53 | 76 | 76 |
| Raphael Weill & Company | 0 | 0 | 0 | 0 | 0 | 10 | 10 | 12 | 12 |
| Westcott Express Company | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36 | 36 |
| Western Electric Company | 0 | 0 | 2 | 4 | 5 | 5 | 9 | 15 | 19 |
| Western Meat Company | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 11 | 12 |
| Westinghouse-Church-Kerr Co. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 30 |
| R. H. White Company | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 13 | 13 |
| J. G. White & Co., Inc., Interests | 0 | 1 | 1 | 1 | 1 | 1 | 4 | 16 | 19 |
| White Bus Line Company | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 12 | 16 |
| White Taxicab Company | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 11 | 11 |
| White Transit Company | 0 | 1 | 1 | 2 | 6 | 9 | 19 | 29 | 31 |
| E. H. Wiener Company | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| Woodward & Lothrop, Inc. | 0 | 1 | 1 | 3 | 3 | 4 | 7 | 13 | 14 |
| Geo. Worthington Company | 0 | 0 | 1 | 2 | 2 | 2 | 4 | 8 | 10 |
| Yellowstone Park Transp. Co. | 0 | 0 | 0 | 0 | 0 | 0 | 106 | 112 | 112 |
| Yosemite Transportation Co. | 0 | 0 | 0 | 1 | 7 | 7 | 25 | 27 | 24 |
| Zettelmeyer Coal Company | 0 | 0 | 1 | 2 | 2 | 3 | 4 | 5 | 10 |
| Zumstein Taxicab Company | 0 | 0 | 0 | 2 | 2 | 6 | 10 | 20 | 25 |
| | 54 | 194 | 495 | 1001 | 1704 | 2601 | 5147 | 7436 | 9227 |

THE WHITE COMPANY

*Cleveland*

# EMPLOYERS LIABILITY INSURANCE
## AT COST

**THE MILLERS INDEMNITY UNDERWRITERS made the following record during 1918:**

| | |
|---|---|
| Saved cottonseed oil mills | 28% |
| Saved cotton gins | 30% |
| Saved Emergency Fleet Corporation Ship Yards | 25% |
| Saved cotton mills | 27% |
| Saved miscellaneous class | 25% |

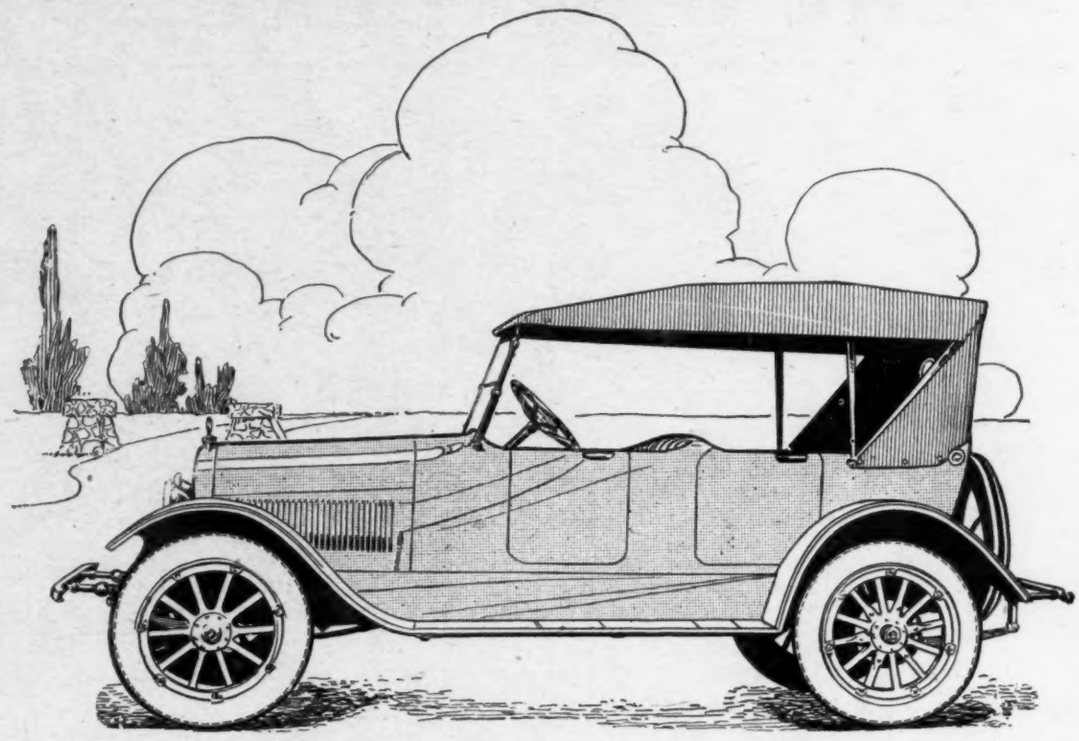
**One-half million dollars in premiums were written last year, at a total savings to policyholders of $140,000. One million dollars in premiums will be written during 1919, at an approximate saving of $250,000.**

**We operate in all the Southern States, writing preferred risks only, under Workmen's Compensation and Employer's Liability Laws. Your inquiries are solicited.**

# MILLERS INDEMNITY UNDERWRITERS

**Bailey & Collins, Managers**

Dallas, Texas Atlanta, Georgia New Orleans, La.
Greenville, S. C.



# The Hanson Six

A Car of ***Permanent Beauty***—beauty in performance as well as in the lines which give it so distinctive appearance.

The outward beauty is apparent to the eye, but it takes months of ***SATISFIED*** ownership to prove its paramount quality—that of SERVICE, of prime importance to a prospective purchase.

## *SPECIFICATIONS*

STEERING GEAR—Gemmer steering gear on left side of chassis. Irreversible type; 18-inch wheel.

WHEELS—12 hickory spokes, front and rear, fitted with demountable, quick detachable rim. Extra rim carried on rear.

RADIATOR—Long Radiator; special design—3½-inch core with large top tank.

CONTROL Levers in center of car—mounted on transmission case. Control lever on ball pivot. Accelerator pedal for right foot. Starter pedal center of toe board. Spark and throttle levers and horn button on steering wheel.

BODY—Double cowl type of special design, low, graceful stream lines. Instruments mounted on detachable panel in walnut instrument board. Tonneau cowl walnut panel with lamp. Best-grade Coil springs. Tool compartment under front seat.

INSTRUMENT BOARD—60-mile Stewart speedometer driven from transmission. Total and trip mileage recorder. Oil pressure gauge. Locking ignition and lighting switch. Current indicator. Carburetor air adjustment and instrument lamp.

FENDERS—Semi-crowned, 10 inches wide. Linoleum covered, aluminum bound running boards. Radiator splash shield.

UPHOLSTERY—Genuine grain leather stuffed with natural curled hair.

WINDSHIELD—Slanting, clear vision, ventilating.

TOP—One-man type, 4 bows, Jiffy side curtains. Beveled plate glass vision in rear. Highest grade material.

TIRES—32x4. Plain tread front, non-skid rear.

WHEELBASE—119 inches.

TREAD—56 inches.

LAMPS—Electric, two 11-inch headlamps with dimmer, tail lamp, dash lamp and tonneau lamp.

EQUIPMENT—Electric horn, robe rail, foot rail, tire carrier with demountable rim, license bracket, tire pump, jack, tool kit motometer.

APPROXIMATE SHIPPING WEIGHT—2700 pounds.

PRICE—$1,685.00 F. O. B. Atlanta, subject to change without notice.

MOTOR—40-45 H. P. Continental Red Seal. Unit power plant. 6 cylinder "L" head cast in block with removable water-cooled head. 3¾-inch bore by 4½-inch stroke. All valves enclosed.

OILING—Circulation by pump and splash system, overflow to timing gears. Register on motor and dash.

COOLING—Pump system, large radiator, ample cooling surface; multi-blade adjustable fan driven from cam shaft pulley.

CARBURETOR—Stromberg, fitted with auxiliary hot air intake from exhaust pipe.

FUEL SYSYTEM—Stewart vacuum feed. Tank suspended at rear. Capacity 18 gallons, equipped with gauge.

STARTING AND LIGHTING—2 unit generator, connected direct to timing gear. Coil and distributor mounted on generator. Starting motor connected directly to fly-wheel housing with Bendix Drive.

BATTERY—Large 13-plate Prest-O-Lite battery, carried under front seat.

FRAME—Extra wide pressed steel frame of high carbon steel.

SPRINGS—Chrome Vanadium Steel, semi-elliptic, 2 inches wide. Front 38 inches long, flat when loaded; rear 54 inches long flat when loaded. Equipped with wing-cap grease cups.

REAR AXLE—Timken, ¾ floating spiral, bevel gear type. Timken bearings throughout. Service brake, external contracting; emergency brake, internal expanding on rear wheel drums. Both brakes equalized.

FRONT AXLE—Timken drop forged "I" beam with Timken bearings in hubs.

TRANSMISSION—Covert 3-speed and reverse; large gears, wide face, ball-bearing throughout; attached direct to Bell housing.

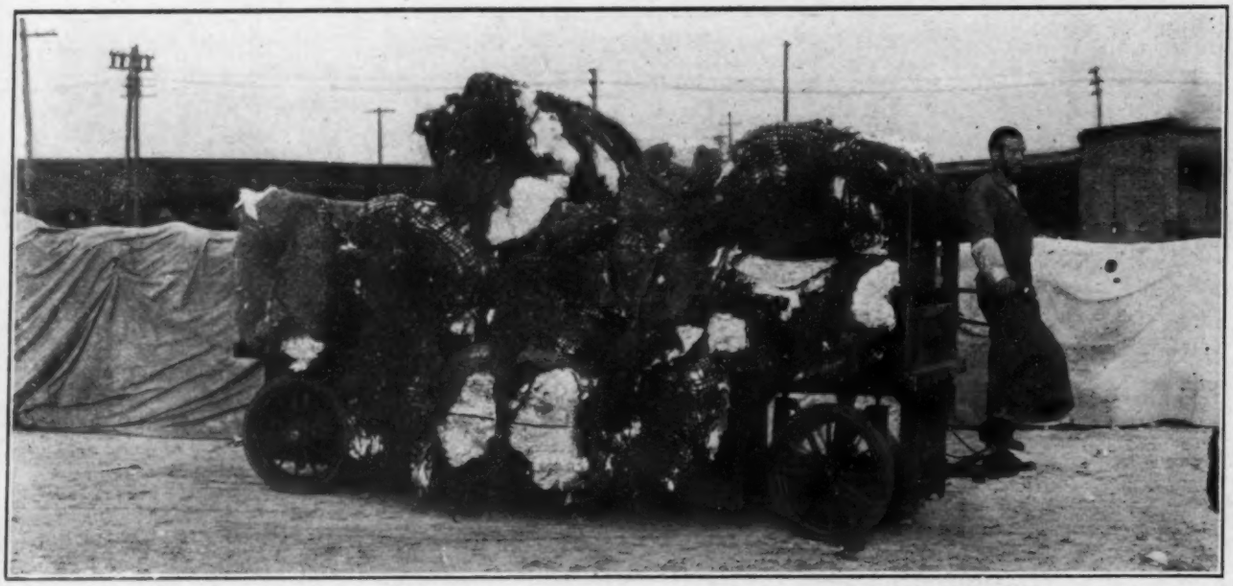
CLCTCH—Borg and Beck clutch. 3-plate dry operating type, very easy pedal operation.

UNIVERSAL JOINT—Sliding ball joint, tubular type, large joints, Hotchkiss drive.

## HANSON MOTOR COMPANY

*Factory and Offices, Atlanta, Ga.*
*Phone, West 2000*

# CHEAP HAULAGE



ONE man with an Elwell-Parker Truck will haul ten times the goods, at twice the speed he previously moved on a hand truck.

Modern haulage methods are more essential if high speed mill machinery is to be kept busy.

Transportation in and about the mill at receiving, between departments, at shipping platform or boiler house handling fuel and ashes, must be accomplished with regularity and at least expense.

Elwell-Parker trucks are designed to be used in close quarters. Anyone can learn to operate after an hour's practice. Constructed of steel. Interlocked control makes the msafe anywhere in mill. Capacity—any load up to two tons. Operate 15 to 20 miles on one battery charge.

Our engineers will fit one of the many types to your present mill layout. Successfully installed in many parts of the world.

Equipped with Lead or Edison Batteries.

## THE ELWELL-PARKER ELECTRIC COMPANY

**"Pioneer Builder of Electric Industrial Trucks"**

**Cleveland, Ohio** **U. S. A.**

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| New York | Richmond | Washington | Montreal | Denver | San Francisco |
| Boston | Newark | Atlanta | New Orleans | Dayton | Chicago |
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| Worcester | Baltimore | Charlotte | Buffalo | Youngstown | St. Louis |
| Milwaukee | Minneapolis | St. Paul | Cincinnati | Detroit | Kansas City |
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# DELIVERING THE GOODS WITH AN "ITC"

**HOW MUCH** does the trucking of your raw cotton and cotton fabrics cost you? Too much—if you are not using an **ITC** Industrial Tractor. Cost-cutting is permanently effected by installing an **ITC** Storage Battery Truck. The vital necessity of speeding up the movement of baled cotton or crated cotton goods for shipment has proven hand trucking methods absolutely inadequate and obselete. On the great congested platforms where cotton is stored the **ITC** lifts and carries loads up to 20,000 lbs.—moving easily through intersecting aisles and piled up merchandise. It is an absolute modern necessity in storehouse, dock and warehouse.

THE ITC ELEVATING TRUCK is used in connection with separate wood or metal platforms, skids, racks or crates. The machine is backed under the loaded platform and an hydraulic ram, operated by a separate motor elevates the load from the floor and locks it in place. Operated by one boy, or a girl, it does the work of a score of men.

To UNLOAD the ITC it is only necessary to press the release lever, when the load, no matter how heavy, will smoothly and quietly settle to the floor without shock or jar. The elevating mechanism requires no current to lower the load. The load can be stopped immediately at any point, travelling either up or down.

**OUR SOUTHERN REPRESENTATIVES ARE:**

**The Lovingwood Co.,**
**406 Peters Bldg., Atlanta, Ga.**

**F. J. Gauntlett,**
**Wilkins Bldg., Washington, D. C.**

**SEND FOR BULLETINS ON THE PERFORMANCE OF THE ITC.**

## INDUSTRIAL TRUCK COMPANY Div.

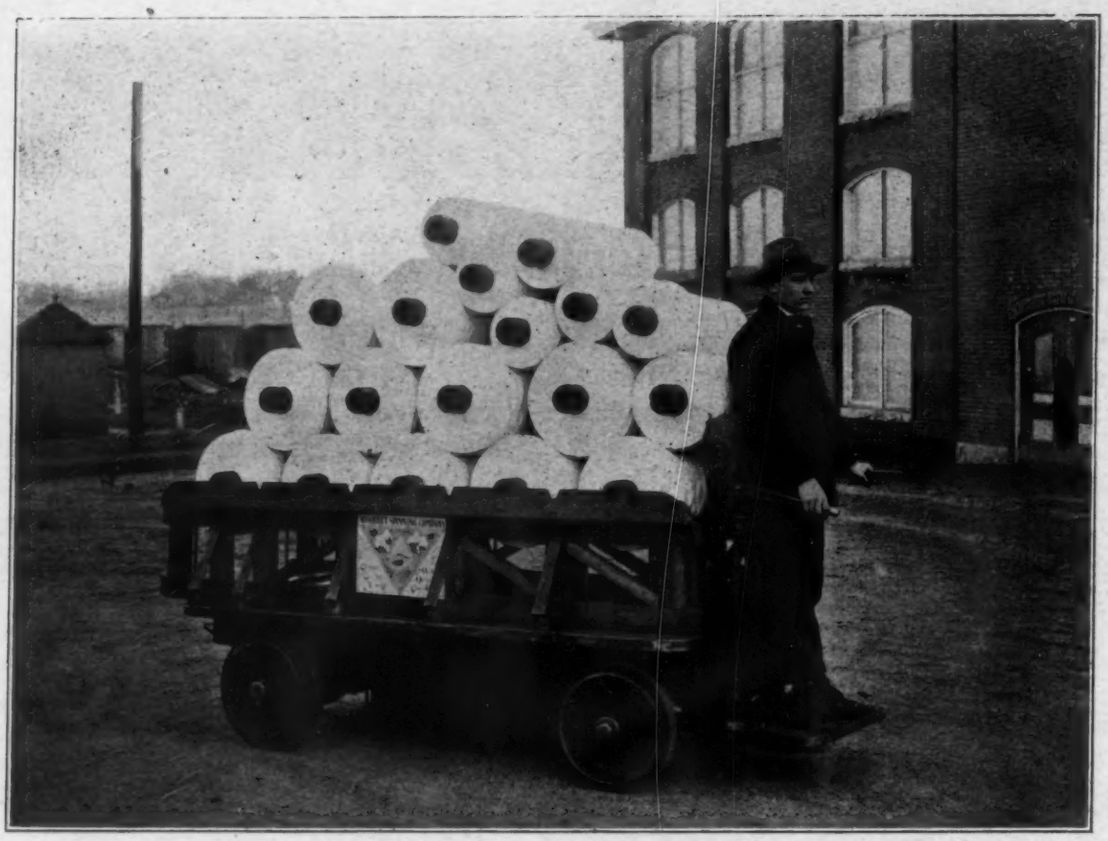
**OF COWAN TRUCK CO., HOLYOKE, MASS.**

**107 CANAL STREET**

## TRACTORS, ELEVATING & LOAD CARRYING TRUCKS

HUNT

# INDUSTRIAL
## STORAGE BATTERY
# TRUCKS



FOR rapidly transporting Raw Material and Finished Products through the mill, or at warehouses, railroad terminals, steamship piers, etc.

Great time and labor savers—Rugged, Reliable — Maintenance nominal.

*Catalog E-18-8 describes them fully.*

**C. W. HUNT COMPANY, Inc.**

**140 Nassau St., New York**

# SOLVING HAULAGE PROBLEMS

# THIS BOOK TELLS HOW

Your time, like most textile executives, is doubtless pretty well taken up, but we believe you will find the time profitably spent by reading this interesting book—for from its pages you may secure suggestions which will mean dollars and cents to your mill.

It explains systems that have solved the haulage and trucking problems of other manufacturers—how they are moving more material more quickly and with fewer men and enable you to put these men to more productive work, relieve congested aisles filled with truckers,—in short

## "THE TRACKLESS TRAIN"

is a story of lowered costs—of increased mill efficiency. Every mill of from 10,000 to 150,000 spindles will find "The Trackless Train" system the only true economical way to handle the moving material in and about the mill—a completely charted transportation system adapted to the peculiar requirements of each mill.

**FILL OUT AND MAIL THIS COUPON TODAY** →

Just tear out this page and hand it to your stenographer —the book will be sent to you immediately without cost or obligation.

Mercury Mfg. Co.,
4120 So. Halsted St.,
Chicago, U. S. A.: You may send me your free book, "The Trackless Train."

Name .....

Mill .....

City..... State.....

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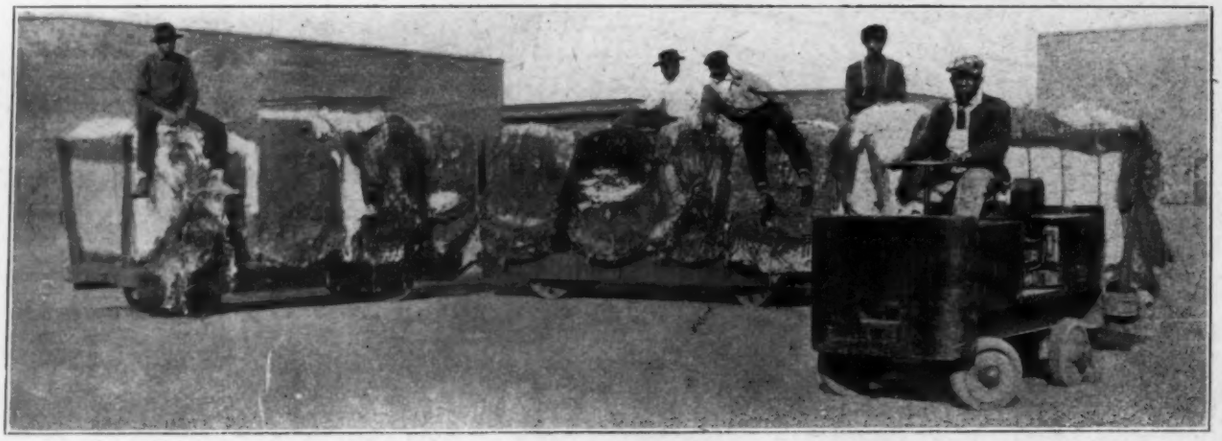


# Quicker, Better, Cheaper Interplant Transportation

"AUTOMATIC" SUPREMACY in interplant transportation in the Cotton World is forcefully demonstrated thru the great number of "Automatic" Trucks, Tractors and Engines that are every day paying for themselves and proving profitable investments in the great cotton industry.

"AUTOMATIC" MACHINES are specially designed for the work for which they are intended. There are many standard models—one to perfectly meet the conditions in YOUR plant. Write for detailed information that shows what "Automatic" installations have accomplished.

## Write for Attractive Illustrated Catalogue

Plant engineers with long experience in the cotton industry are at your command to provide you with practical suggestions, without obligation on your part.

## The Automatic Transportation Co.

OFFICES IN ALL PRINCIPAL CITIES.

*Pioneer and World's Largest Manufacturers of Storage Battery Industrial Trucks, Tractors and Engines.*

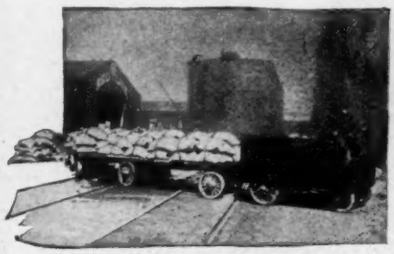
**BUFFALO, N. Y.**

# Electric Transportation

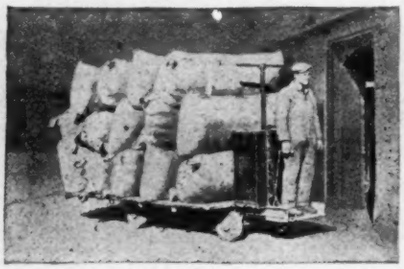
Thos A Edison

Original purchases of electric trucks and delivery wagons have been added to until large fleets are now established. Many of the owners of these fleets will be recognized immediately as transportation experts.

Have you investigated the economy in using electrics for your hauling and delivery *(figured in dollars and cents)*?



Storage-Battery Tractor, EDISON-equipped. Hauls long trains of loaded trailers.



Storage-Battery Truck, EDISON-equipped. Does the work of 5 to 12 hand truckers.

Mining Locomotive, Edison-equipped. (Miner wearing Edison Electric Safety Mine Lamp.)

For electric commercial trucks, for storage-battery industrial trucks and tractors, for industrial and mining locomotives, for safety mine lamps, farm light and power—*wherever dependable batteries are needed*, it pays to specify the

# STORAGE Edison Battery

The Edison principle is totally different from that of all other storage batteries. Other batteries use lead peroxide or spongy lead in acid electrolyte. Mr. Edison chose nickel hydrate, iron oxide, and an alkaline electrolyte. This radical departure from old-time methods permits an all-steel construction, and altogether a battery of superior ruggedness and longer life (proved by Edison Storage Batteries in service over six and seven years).

*For complete information, use the coupon or write to*

The Edison Storage Battery Co., Orange, New Jersey

TRADE MARK Thomas A. Edison A PRODUCT OF THE EDISON LABORATORIES

Edison Storage Battery Co., 311 Lakeside Ave., Orange, N. J.

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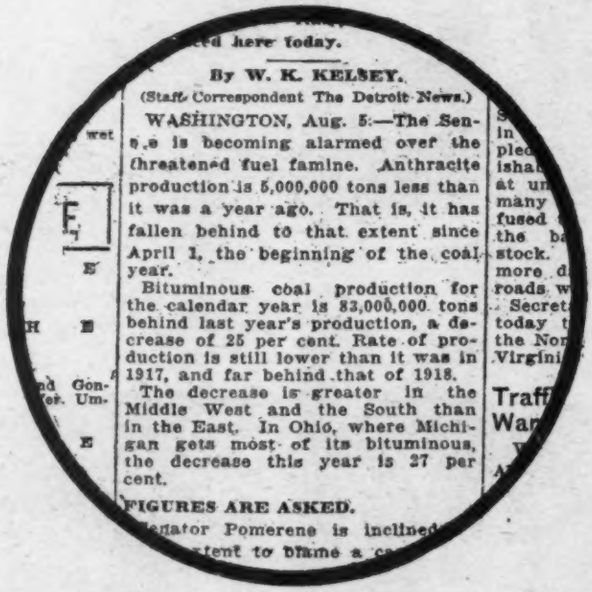
☐Commercial Trucks ☐Farm Light and Power Plants ☐Industrial Trucks ☐Yacht Lighting
☐Safety Mine Lamps ☐Industrial Locomotives ☐Train Lighting ☐Lumber Tractors

*(Write name and address on margin of page)*

# With a Threatened Coal Famine Make The Most of Your Fuel Supply



...ed here today.

By W. K. KELSEY.

(Staff Correspondent The Detroit News.)

WASHINGTON, Aug. 5.—The Senate is becoming alarmed over the threatened fuel famine. Anthracite production is 5,000,000 tons less than it was a year ago. That is, it has fallen behind to that extent since April 1, the beginning of the coal year.

Bituminous coal production for the calendar year is 83,000,000 tons behind last year's production, a decrease of 25 per cent. Rate of production is still lower than it was in 1917, and far behind that of 1918.

The decrease is greater in the Middle West and the South than in the East. In Ohio, where Michigan gets most of its bituminous, the decrease this year is 27 per cent.

FIGURES ARE ASKED.

...enator Pomerene is inclined ... extent to blame a ...

A coal shortage is predicted!

And with higher prices and a threatened fuel famine a possibility, you should make sure that your coal works for you to the fullest extent.

Waste no heat units—reduce your coal consumption 10 to 20 per cent by returning the condensation in your steam lines direct to your boiler.

The Morehead Back-to-Boiler System returns the boiling hot water resulting from condensation at temperatures as high as 320 degrees Fahrenheit.

It keeps steam heated equipment at highest efficiency by removing all condensation as it forms in steam lines.

The Morehead System not only saves an average of 20 per cent on coal bills but returns the hot water 90 per cent cheaper and from 10 to 200 degrees hotter than a pump can handle.

The Morehead is the twentieth century steam drainage and boiler feed system.

We will gladly refer you to plants, similar to your own, where the Morehead System has speeded up production, reduced coal consumption—effected savings that paid for the Morehead System the first few weeks.

Write for catalog.

**Morehead Manufacturing Company**

Power Department.

Detroit, Michigan

Canadian Morehead Mfg. Co., for Dominion of Canada, Woodstock, Ont.

The "Morehead" Return Trap.

Positively Drains All Types of Steam Apparatus

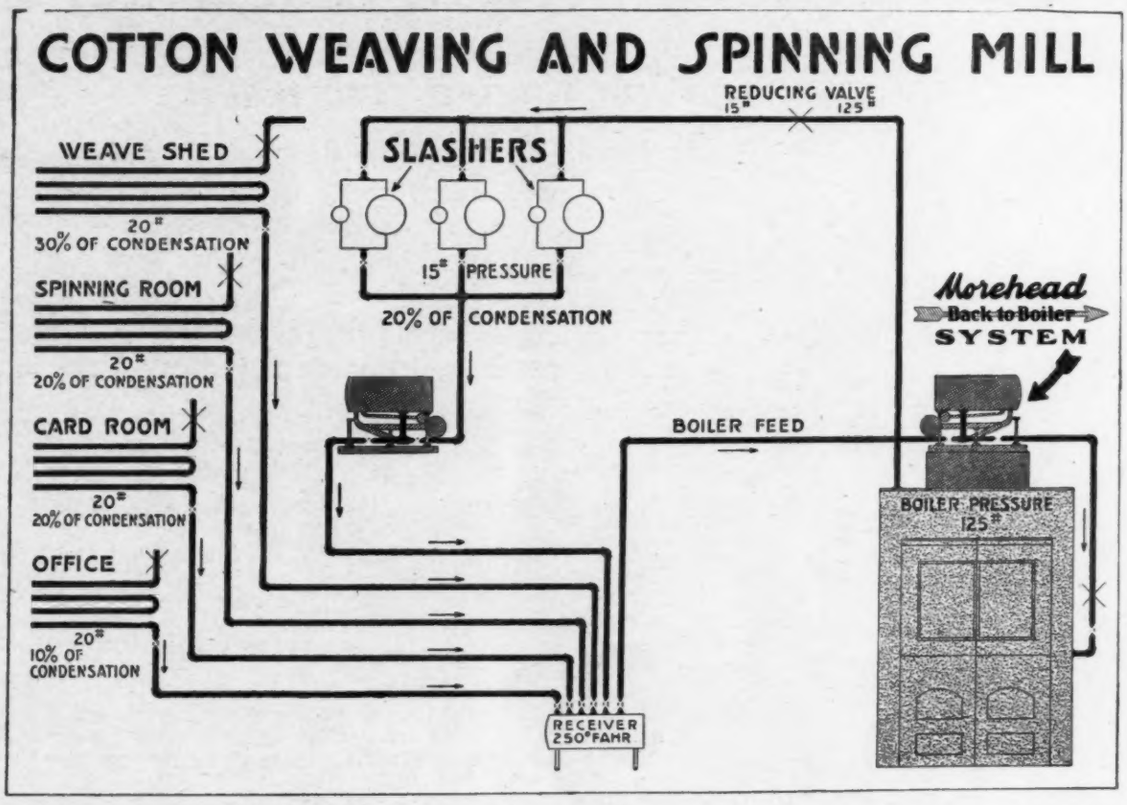
Delivers Condensation And Feed Water to Boiler Under All Conditions at Maximum Temperature

Your Fuel Bills are Less

Morehead

"BACK-TO-BOILER-SYSTEM"

# Eliminates Sluggish Circulation In Your Steam-Heated Machines




The Morehead Back-to-Boiler System is used in hundreds of America's leading cotton mills to drain condensation from steam lines and steam heated machinery.

The condensation is then returned under pressure to the boiler as pure hot feed water—ready to be used again with the least consumption of fuel.

The way to get the most out of your slashers, calenders, dye vats and other steam heated equipment is to eliminate sluggish circulation—and sluggish circulation is impossible with the Morehead System on the job.

Summed up—an installation of the "Morehead" System simply means that you keep your machines constantly working at a high temperature through the perfect drainage of all condensation—and further, that you save a large percent of your fuel.

Write us fully regarding conditions in your plant and receive the free advice of our Engineers together with a copy of the Morehead Book.

**Morehead Manufacturing Company**

Power Department.

**Detroit, Michigan**

Canadian Morehead Mfg. Co., for Dominion of Canada, Woodstock, Ont.

The "Morehead" Return Trap.

Positively Drains All Types of Steam Apparatus

Delivers Condensation And Feed Water to Boiler Under All Conditions at Maximum Temperature

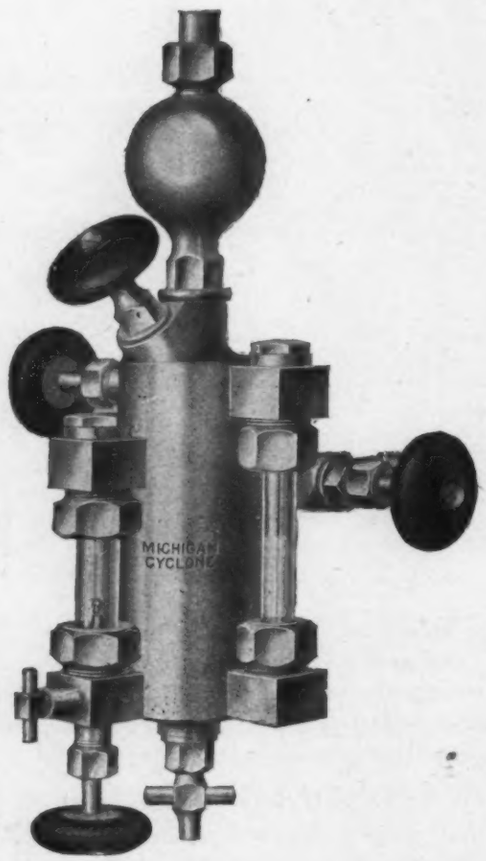
Your Fuel Bills are Less

Morehead

"BACK-TO-BOILER-SYSTEM"

# The Michigan Cyclone Lubricator

***Safeguards Your Engine Lubrication In All Kinds of Weather—***




The Michigan is the all-year-'round Lubricator. Even on the coldest winter days the heaviest oil flows freely and regularly when supplied by the Michigan. This is made possible by the construction of the heating chamber in the lubricator. It is always filled with **live steam.**

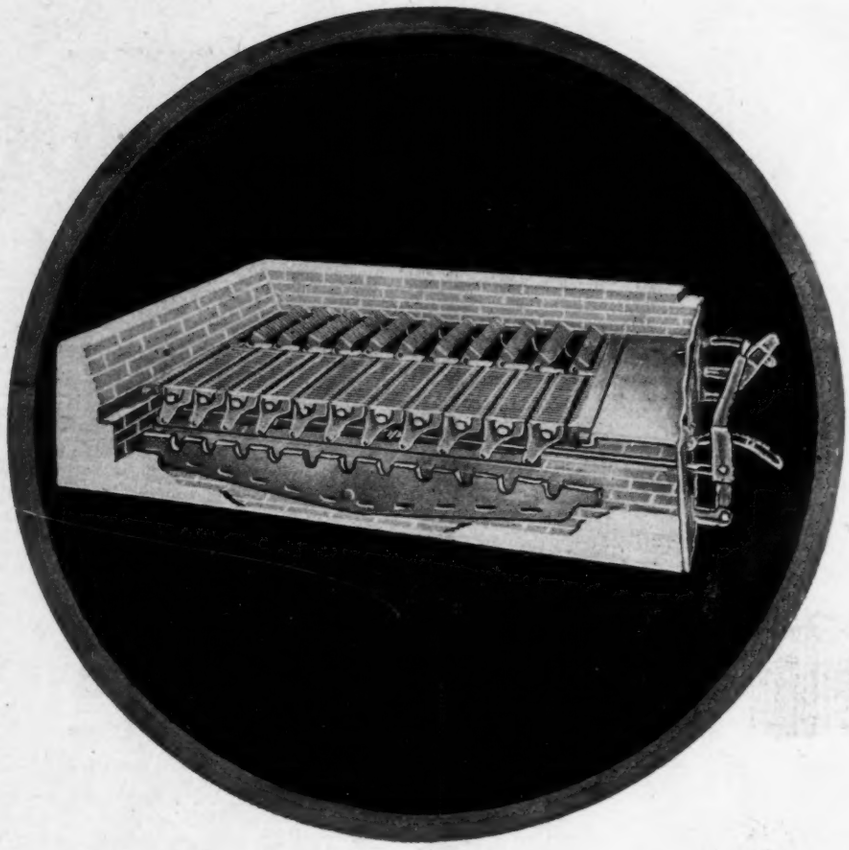
The "Michigan Cyclone" is the Engineer's favorite because it "delivers the goods." It is sturdy and substantial—made of selected materials—built for long, hard service.

It is a **practical** lubricator in every sense of the word.

***Write for leaflet.***

## Michigan Lubricator Company

**Detroit, Michigan**



# The Ultimate in A Fuel Saving Labor Saving, Durable Grate

Coal will not be plentiful for many years to come, and it's up to every power plant in America to prepare for still greater fuel economy.

The grate is the first thing to consider in putting your plant on a more economical basis. Coal economy depends on the way the grate burns it.

CANTON Rocking and Dumping Grates have long been known as "Fuel Saving Grates," and they have always lived up to their name. They are especially designed with the thought of **economy** and **durability**, and there still remains to be shown one installation that has not affected worth-while savings.

Canton Grates not only allow the use of the cheaper grades of coal, but at the same time they will increase your boiler capacity. It is easy to keep a clear, free-burning fire and reduce clinker and cinder to a minimum. There can be no loss of fire through the bars, as the special locking device keeps a smooth, even grade surface at all times. The shaking and rocking patented device breaks up the fire **without wasting any fuel.**

The Canton Grate is extraordinarily durable and seldom requires repairs. Its durability is due to double bracing of bars and the ample cooling spaces.

It is easily installed by any mechanic, and when it becomes necessary to replace a bar this can be done while furnace is in operation. No time lost through shut-downs.

In short, it is the Ideal Grate, absolutely guaranteed. Write today for our new catalog.

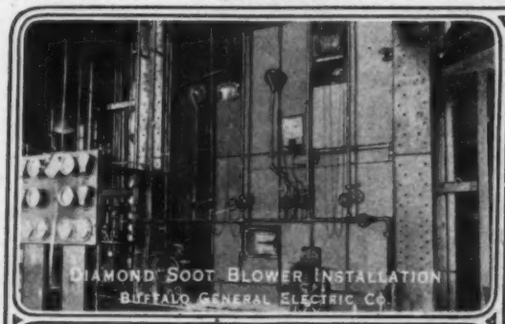
## Canton Grate Company, Canton, Ohio

**Atlanta Representative: W. P. McBurney, 829 Trust Co. of Ga. Bldg.**

# CANTON ROCKING and DUMPING GRATE

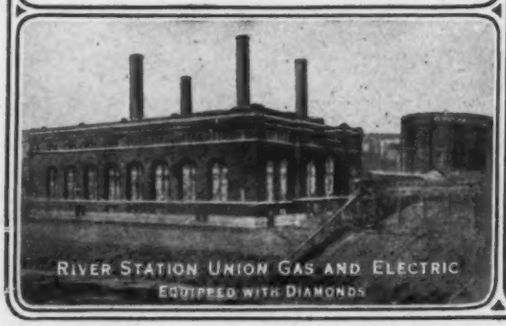
*"The Fuel Saver"*

# Standard in the World's Largest Power Plants



DIAMOND SOOT BLOWER INSTALLATION
BUFFALO GENERAL ELECTRIC CO.

CONNORS CREEK PLANT, DETROIT EDISON
EQUIPPED WITH DIAMONDS



RIVER STATION UNION GAS AND ELECTRIC
EQUIPPED WITH DIAMONDS

Visit the boiler rooms of the largest power plants in America, and you will find Diamond Soot Blowers in practically all.

WHY?

Because diamonds are essential to the cheap production of power. In no other way, than by their use, can clean heating surfaces be maintained. And clean heating surfaces in a boiler mean increased ECONOMY, CAPACITY and SAFETY.

In the average plants Diamond Soot Blowers will effect the following economies:

1.—FUEL; a saving of 4% to 8%.
2.—BOILER EFFICIENCY; an increase of 4%.
3.—LONGEVITY; an increase in the length of service of boiler tubes, through the prevention of corrosion.
4.—LABOR; a saving of many hours per day.
5.—STEAM; a saving of 25% to 75% of steam used for cleaning.

You will find Diamond Soot Blowers in the following representative power plants:

| | |
|---|---|
| Woods Worsted Mills | Baltic Mills |
| Lafayette Worsted Mills | Dominion Textile Co. |
| Riverside Cotton Mills | Canadian Cotton, Smt. |
| Hurdsville Cotton Mills | Cortland Carriage Goods Co. |
| Middlesex Cotton Mills | United States Worsted Co. |
| Salter Manufacturing Co. | Monarch Cotton Mills |
| Summit Thread Co. | Farr Alpaca Co. |
| Knoxville Cotton Mills | River Spinning Co. |
| Brookside Mills | Boston Duck Co. |
| Cornell Mills | Tecumseh Mills |

There are hundreds of others. If the managers, superintendents, and chief engineers of these plants consider Diamonds essential, there must be very substantial reasons why your boilers should likewise be equipped.

For Full Information ask for Bulletin 184.

DIAMOND POWER SPECIALTY COMPANY
Detroit, Michigan

# Diamond

## SOOT BLOWERS - SAVE 4 to 8% FUEL

# ABOUT SUBJECTS EVERY COTTON MILL MANAGER SHOULD KNOW

Now is the time to post yourself on subjects vital to industrial reconstruction.

The Wright-Austin Company has just published three booklets of unusual interest to power plant engineers—containing complete information about our power saving, cost reducing steam specialties.

The booklet entitled "Steam Traps—Air Traps—Strainers," tells how to solve the condensation problem—to insure a constant flow of dry steam, and the resulting increased efficiency.

Elimination of moisture from the live steam current is absolutely necessary, if you expect your engine to develop the highest possible efficiency. This important subject, as well as how to make the best possible use of exhaust steam, is carefully covered in our booklet "Austin Separators."

"Boiler Trimmings" contains description of our safety alarm water columns, automatic boiler feed regulators and automatic pump governors. It tells about the saving of heat and fuel that results from insuring a steady supply of water in your boilers.

Let us send you any one—or all three of these booklets—which offer valuable suggestions on securing best results in power plants. Check the coupon below.

**WRIGHT-AUSTIN "STEAM SAVERS"**

- Wright "Emergency" High Pressure Continuous Flow Steam Trap
- Wright "Victor" Low Pressure Automatic Continuous Flow Steam Trap
- Wright Improved Safety Alarm Water Column
- Wright "Cyclone" Exhaust Head
- Austin Live Steam Vertical Iron Separator
- Austin Live Steam Horizontal Iron Receiver Separator
- Austin Live Steam Horizontal Iron Separator
- Austin Live Steam Vertical Iron Receiver Separator
- Austin Live Steam Horizontal Cast Head and Large Shell Receiver Separator
- Austin Horizontal Special Oil Separator
- Murray Automatic Pump Governor
- Wright Strainer
- Murray Automatic Boiler Feed Regulator

**WRIGHT-AUSTIN CO., Detroit, Mich.**

You may send me, without obligation upon my part, the booklets checked below.

☐ "Steam Traps—Air Traps—Strainers"
☐ "Austin Separators and Exhaust Heads" ☐ "Boiler Trimmings"

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Company _____

Street _____

City _____ State _____

**WRIGHT-AUSTIN COMPANY, 72 Woodbridge Street, DETROIT, U. S. A.**

**Branch Offices: NEW YORK CHICAGO ATLANTA BOSTON**

*Representatives and* Standard with STEAM USERS SINCE '94 *Dealers Everywhere*

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BOSTON NEW YORK PHILADELPHIA CHARLOTTE SAN FRANCISCO

# INTERNATIONAL ENGINEERING WORKS, INC.

INCORPORATED UNDER THE LAWS OF MASSACHUSETTS

## FRAMINGHAM, MASS.

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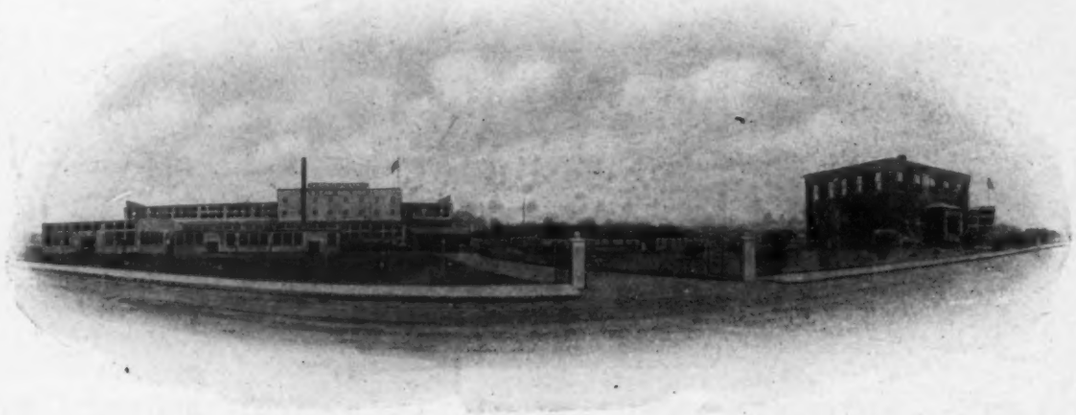
ISAAC HARDEMAN, CHARLOTTE, N. C.



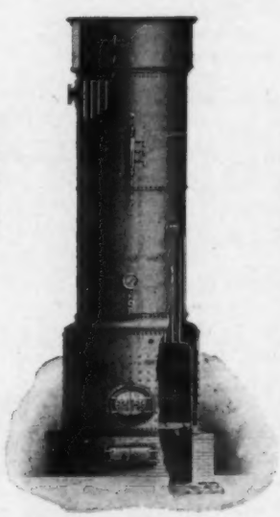
## HIGH PRESSURE STEAM BOILERS

Built to conform to the Massachusetts State Code of Boiler Rules and the A. S. M. E. Standard

## SPECIAL PLATE WORK FOR PAPER TEXTILE, CHEMICAL, INDUSTRIES INCLUDING KIERS, SOAP AND DYE TANKS TO STANDARD OR SPECIAL DESIGN.

Horizontal Return Tubular Boiler.

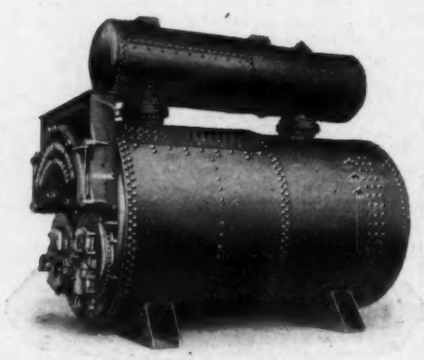
The standard type boiler, constructed with the best workmanship subjected to rigid inspection, and built by improved methods.



Manning Boiler.

A minimum amount of floor space per horse power.

A boiler that can be built for higher steam pressures also giving superheated steam.



Brady Scotch Boiler.

A Scotch boiler that has perfect circulation.

Small Radiation loss due to internal furnaces and no troublesome brick settings.

*Let us send you the Sherwood Book which completely describes all Sherwood Steam Specialties. Write your name and address on the margin of this page, forward it on to us, and the Sherwood Book will arrive at your home by return mail.*

# "It's the Best Ejector Built"

Ask any engineer what ejector he prefers.

Invariably his answer will be "Eagle." And he will also tell you that the "Eagle" is the most economical pump on the market.

Built for lifting water or other liquids to any desired height the "Eagle" has no valves to wear, insuring maximum durability and service.

It is built in sizes of 250 to 15,000 gallons per hour.

The "Eagle" Ejector is but one of the Sherwood Steam Specialties fully described in our catalog, which will be sent you upon request.

## SHERWOOD MANUFACTURING CO.

BRASS FOUNDERS AND FINISHERS

BUFFALO, N. Y. U. S. A.

# SHERWOOD

## ENGINEERING-SPECIALTIES

# 3 TYPES

① Underfeed Stokers
② Roney Stokers and
③ Chain Grate Stokers

## THIS ENABLES US

Accurately to meet the many and varied requirements in the—

## Vast Field of Stoker Application

—Many varieties of coal must be burned.

—The loads to be carried differ widely.

—Mother earth must be considered when foundation requirements come up.

—Headroom limitations often determine the type of boiler and stoker that can be installed.

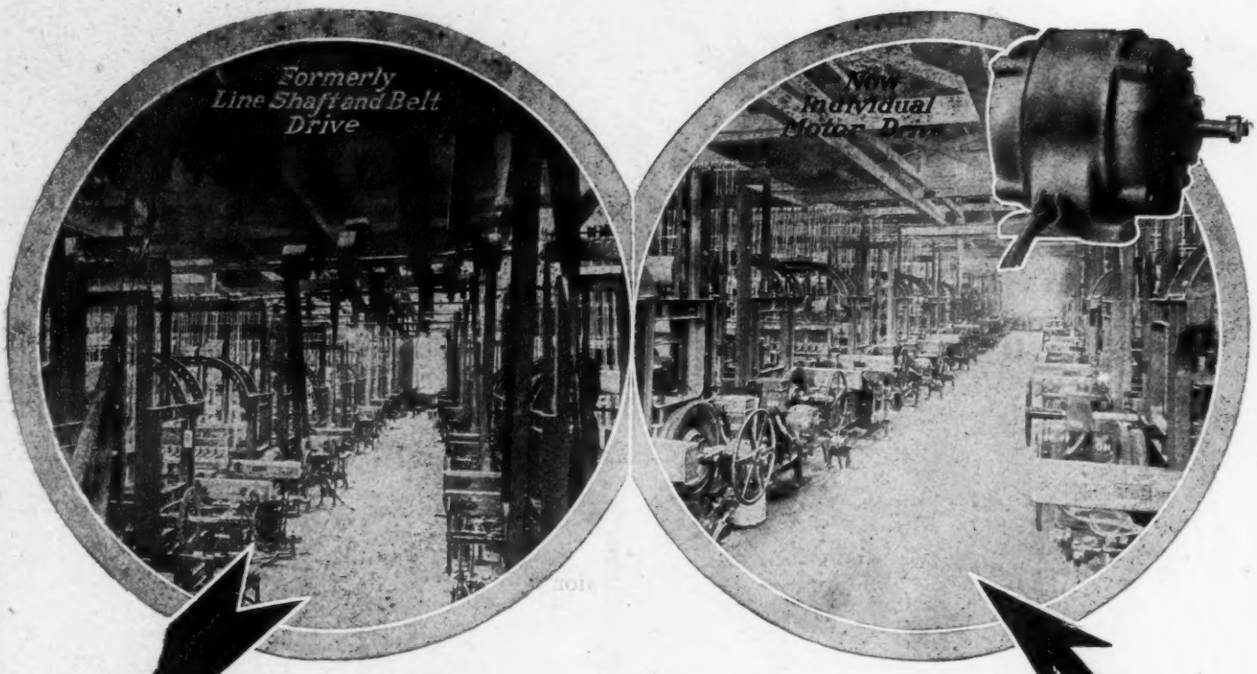
—First cost is something always to be considered.

From the three types, a choice can be made to cover practically any requirement in stoker application. This also enables us more closely to meet your individual requirements. And further, after making recommendations based on a careful study of your plant conditions and requirements, we can confidently leave the choice of type to you.

Westinghouse Electric & Manufacturing Co.
East Pittsburgh, Pa.

We Can Leave the Choice of Type To You

Westinghouse




**John Sidebotham, Inc., of Philadelphia, Pa., manufacturers of Tape, has made the complete change to**

# Individual Motor Drive

**All line shafting, hangers and belts have been removed, ADDITIONAL MACHINES INSTALLED, and all more compactly and more conveniently arranged. Westinghouse Textile Motors were installed on all machines.**

**A 24 Per Cent. Reduction in the Annual Power Bill, with a 19 Per Cent. Increase in Production**

**Here are the figures—**

| | Engine | Individual Motor-Drive | Saving Effected | Production Increased |
|---|---|---|---|---|
| Annual Power Bill . . . | $7127 | $5395 | $1732 | |
| Annual Production per Loom | 4160 lbs. | 4940 lbs. | | 780 lbs. |

**Net cost of the electric installation $15,181.00**

**Westinghouse Textile Engineers are prepared to give the benefit of a broad experience in the solution of your power and production problems.**

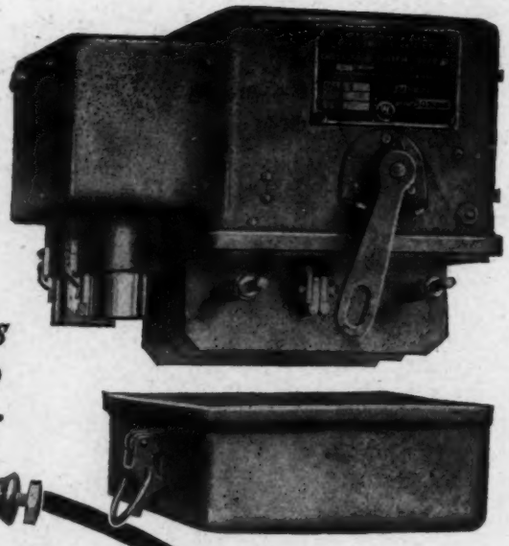
**Westinghouse Electric & Manufacturing Co.**
**East Pittsburgh, Pa.**

FROM MECHANICAL-TO INDIVIDUAL-MOTOR-DRIVE

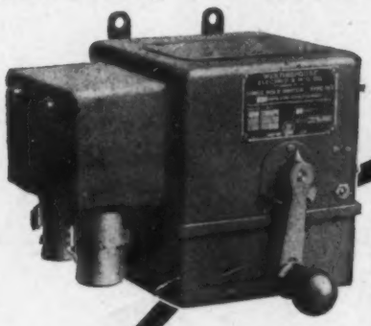
W
WESTINGHOUSE ELECTRIC

# Westinghouse

# —And Now The Type 815—



## *Starting Switch for Squirrel Cage Motors from one-half to 10 Horsepower*



Now that this switch is available at moderate cost, you will not need to worry along with the drawbacks of the old knife switch.

### *What the Type 815 Does—*

—PROTECTS THE MOTOR AGAINST OVERLOADS
—PROTECTS BOTH MAN AND EQUIPMENT AGAINST ACCIDENTAL STARTING OF MOTOR SHOULD POWER UNEXPECTEDLY RETURN.
—LOWERS THE FIRE RISK
—HELPS TO LOWER MAINTENANCE COSTS

*Quick Make and Break*—When once started in either opening or closing direction, action of contacts is automatic and instantaneous, and cannot be stopped or retarded.

*Rolling Contacts*—Arcing is confined to the tips of contacts. The rolling action of contacts prevents roughing or pitting of the contact seats. A strong spring holds contacts firmly in closed position.

*Current Carrying Parts Enclosed*—This precautionary measure safeguards the employee.

*Conduit or Open Wiring*—Knockout holes at top and back.

*Accidental Starting of Motor Prevented*—Hand reset protects workman and equipment against accidental starting of the motor.

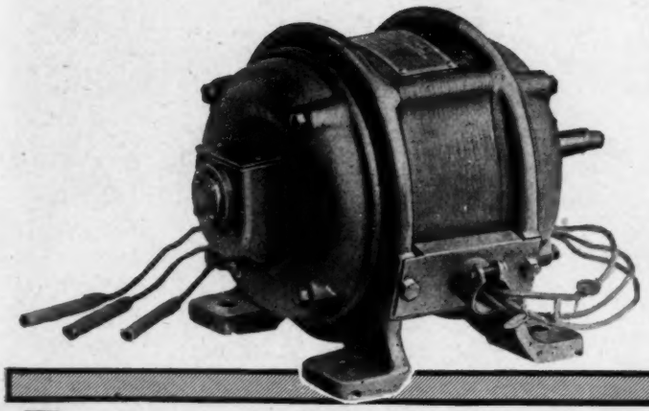
*Rid of the Oil Nuisance*—Switch fitted with asbestos-lined tank and asbestos barriers so that oil need be used only when presence of explosive gases makes it necessary.

***Ask for Descriptive Leaflet No. 1441-A.***

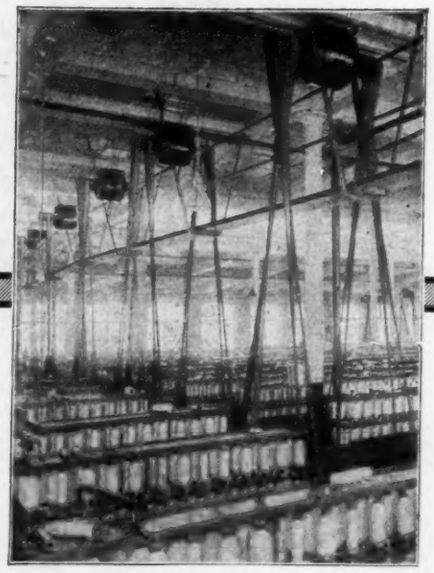
Westinghouse Electric & Manufacturing Co.,
East Pittsburgh, Pa.

W
WESTINGHOUSE ELECTRIC

# Westinghouse



Loom Motor for Individual Drive



Four Frame Drive for Spinning Frames

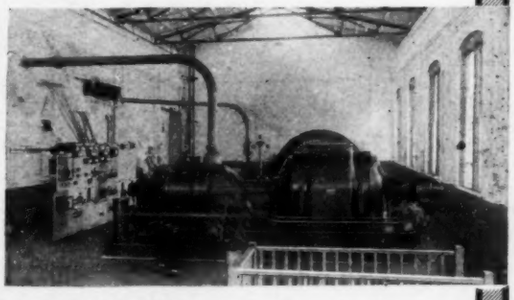
# Electrical Equipment for Cotton Mills

Allis-Chalmers textile motors are built especially for driving textile machinery, having characteristics suited to the driven machines. These can be furnished for either group or individual drive to suit the requirements of the mill.

Special motors furnished for individual drive include those for looms, spinning frames, twisters, pickers, openers, breakers, etc.

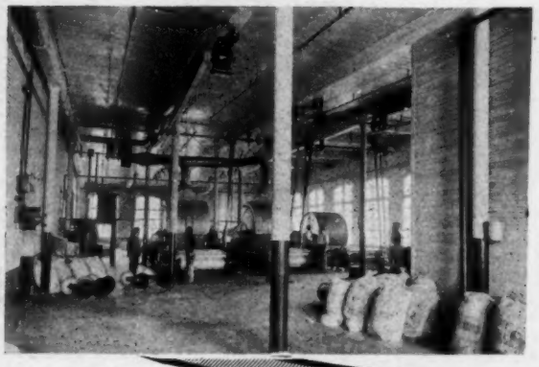
In the line of power machinery the Allis-Chalmers Manufacturing Company builds every type of prime mover—steam turbines, steam engines, hydraulic turbines, gas engines and oil engines—together with a full line of generators for each type. It is the only organization in the world furnishing complete power equipments of every description, built in the same shops and under one management.

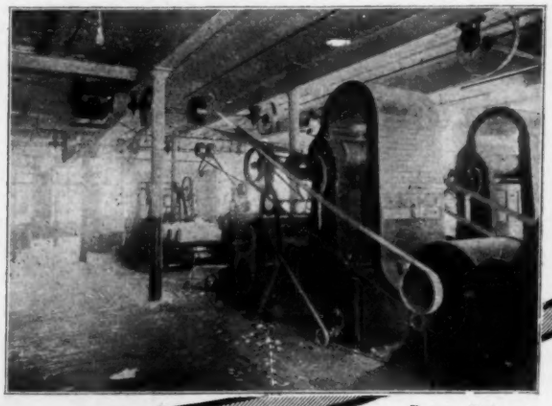
This is supplemented by a very complete line of auxiliary electrical apparatus consisting of exciters, transformers, converters, motor-generators, frequency changers, switch boards, etc.



Power Plant Equipped with Turbines, Engines, Generators and Switchboard

Group Drive in Picker Room





Group Drive in Slasher Room

# ALLIS-CHALMERS

MILWAUKEE, WIS. U. S. A.

# A Screw Driver Is the Only Tool You Need

Pierce Renewable Fuses are so simple—so easy to renew—that the whole operation can be done in *fifteen seconds* with an ordinary screw driver.

There are no loose pieces to misplace—nothing to delay you—it's simply a case of inserting the new fuse link—slipping the outer casing back in place—and then immediately restoring the fuse to use.

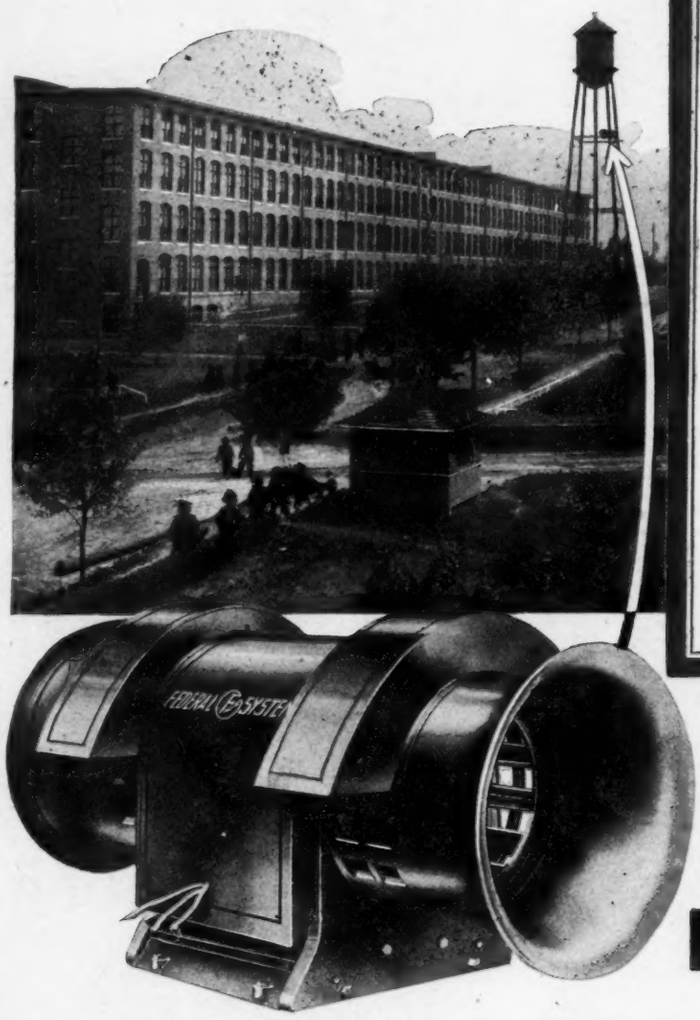
*Ask for Interesting Literature which Describes these Unusual Features in Detail*

**Chicago: Mr. R. S. Blake, % Electric Service Engineering Co., 322 Sherman St.**
**New York City: Hight & Stout, 345 5th Ave.**

PIERCE FUSE CORPORATION
BUFFALO, N.Y.

# PIERCE
## RENEWABLE FUSES

# Averages only ½ cent a day to operate No other expense



Factories and mills everywhere are installing the Federal Electric Siren because of its loud penetrating screech, which is so distinct and is never confused with whistles, bells, etc. Whether used as a fire signal, call system through the mill or factory, or as a "start and stop" signal, it gets the instant attention of the people for whom it is intended. Its penetrating scream and rumbling groan reaches for miles around.

—and it can be operated in a moment's notice at the touch of a button—buttons may be located at different places throughout the property for convenience. Averages only $2.00 a year for electricity to operate—there is no other expense.

No expensive equipment necessary to install as per our simple instructions. Remember it is always ready for instant use. It is never confused with any other signal and gives long and satisfactory service. It is the distinctive signal that you need. Send coupon now for complete information and prices. No obligation.




## The Federal Electric Siren

FEDERAL ELECTRIC COMPANY, *representing Federal Sign System (Electric)*

**Lake and Desplaines Streets, Chicago, Ill.**

Please send full information and prices of the Federal Electric Siren for our factory.

Name .....

Address .....

Company ..... Business .....

(C-10)

# A Screw Driver Is the Only Tool You Need

Pierce Renewable Fuses are so simple—so easy to renew—that the whole operation can be done in *fifteen seconds* with an ordinary screw driver.

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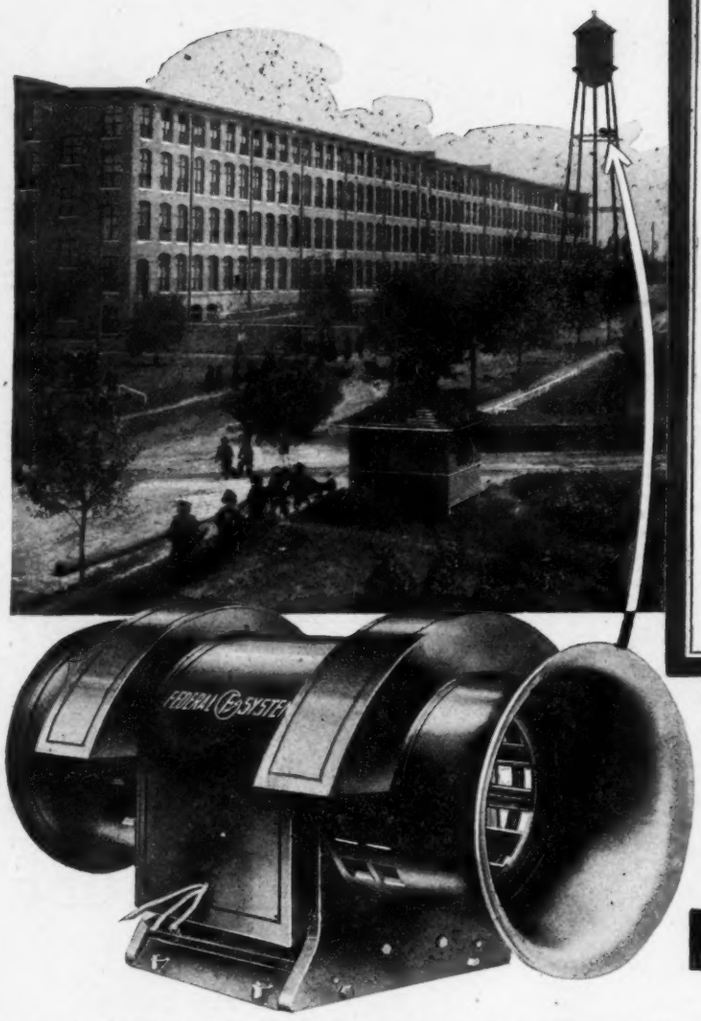

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Please send full information and prices of the Federal Electric Siren for our factory.

Name .....

Address .....

Company ..... Business .....

(C-10)

"Service to Lamps"

# IVANHOE
## SHADES-REFLECTORS

# What Does He Say About Lighting?

Who in your mill is responsible for *getting the goods out?* Who would do the worrying if dark hours or dark days cut down production? Who spends his nights and holidays thinking up ways to *put pep into the workmen?* Who is it that is always studying to lead, to interest and stimulate the men to do *more* work and *better* work, and to do it cheerfully and eagerly and not with sullen reluctance? WHO IS THAT MAN?

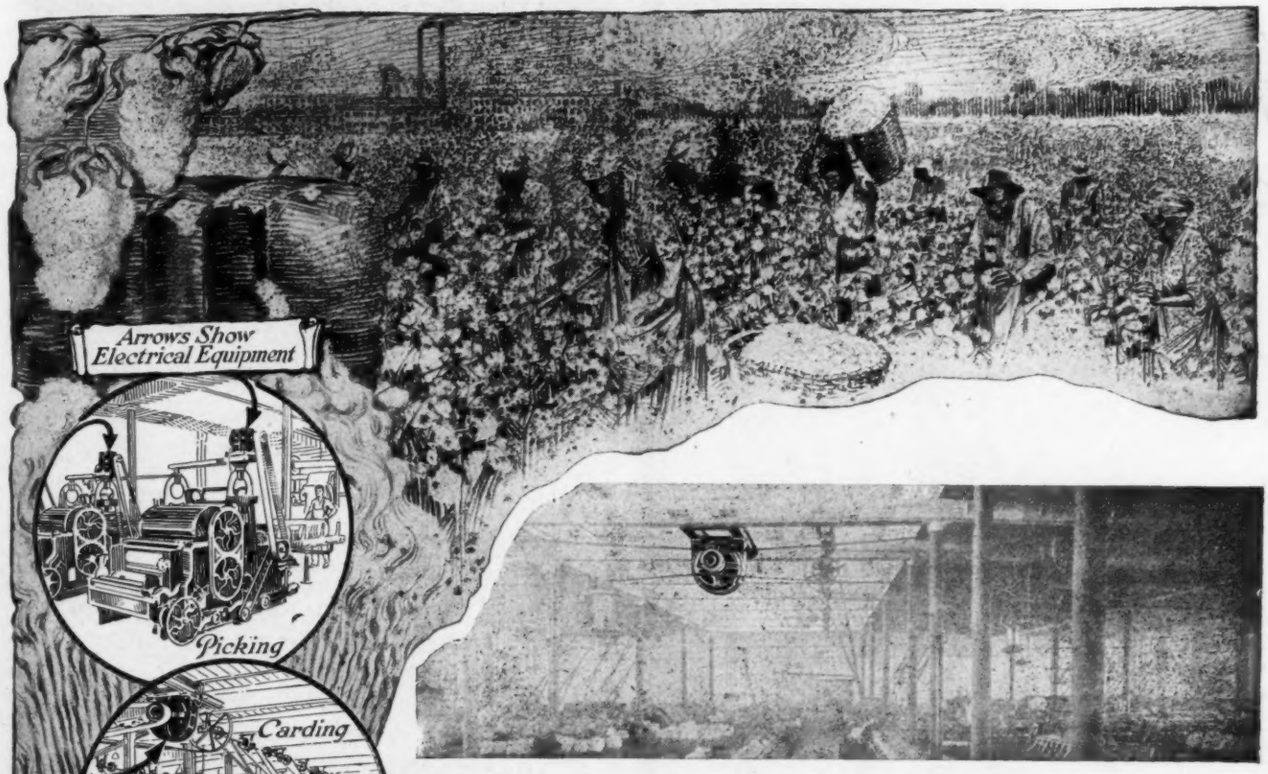
We don't have to talk lighting to *him!* He *knows* it's an invaluable aid in his work. Nor can you give him *too good* lighting. He wants his men to have as good vision, to see as clearly *and as easily*, as the President does in his office. For he has found that real illumination is a wonderful stimulant to *production* and a powerful builder of *goodwill!*

If you are this man's superior and if, unconscious of the bigness of the story he is trying to tell, you have failed to hear him out on his lighting ideas, wouldn't it be wise to call him in NOW and listen to the whole story?

And when you're ready to buy better light, let IVANHOE make some suggestions. We'll help you find the *kind* of lighting you need, and we'll help you figure out both what it will *cost* and what it will *pay!*

IVANHOE-REGENT WORKS,
OF GENERAL ELECTRIC COMPANY,
Cleveland, Ohio

*"Ivanhoe" Steel Reflectors, Lighting Glassware, Self-Adjusting Arms (Anderson Patents) and Illuminating Service.*




Card Room, Erlanger Cotton Mills, Lexington, N. C.

# Electric Power Records Facilitate Efficient Carding

Not only does G-E Motor Drive provide ideal power conditions for obtaining most and best product at least power cost throughout a mill, but it gives the constant speed and great reliability demanded in the card room. Other valuable features of this drive help efficient mill management.

At the Erlanger Cotton Mills, Lexington, N. C., which are driven throughout by G-E Motor Drive, the power meters in the card room are of great assistance in checking the operation of the cards.

Any increase in friction or unnecessary delay in grinding rolls can be immediately discovered, corrected, and power consumption, as well as production, kept where it should be.

The results obtained from motor drive in this mill have been more than satisfactory and the upkeep has been slight.

Our engineer specialists will be pleased to co-operate in solving power problems.

**Principal Office: Schenectady, N. Y.**
**Mill Power Dept. Boston, Mass.**

4

GENERAL ELECTRIC COMPANY

# DAUM REFILLABLE FUSE PLUG

*Saves Time Labor and Money*

*"Eliminate the Non-Essentials"*

**Patents Allowed**

USE the **Newest and Simplest** REFILLABLE PLUG FUSE, one that can replace any plug fuse now in use. It is made entirely of porcelain and can be refilled in less than a minute without the use of tools. Made in all sizes from 3 to 30 Amps. 125 Volts. The refill fuse strips are put up 100 to box in any amperage at $1.00 per hundred list. Price of plugs $15.00 per hundred list.

DIRECTION—In refilling the fuse push the fuse strip in from the bottom and through opening at top of porcelain, pull down side and bend point in slot near bottom of porcelain. Then pull strip tight and push other end in plug, then replace mica.

## A. F. DAUM

**REMOVABLE FUSES OF EVERY DESCRIPTION**

**1157 Hodgkiss Street** **Pittsburgh, Pa.**

# TEXTILE MILL SUPPLY SPECIALISTS

Card Clothing
Roving Cans
Bobbins and Spools
Paper Tubes
Spinning Rings
Ring Travellers
Spindles
Flyers
Mule-spun Weft Carrier for Automatic Looms.
Vitrified Enameled Iron and Porcelain Guides
Wire Goods
Drop Wires
Heddles and Frames, etc. etc.
Metal Stampings
Screw Machine Products
Brass and Bronze Castings and Bushings, etc., etc.
Shuttles of Every Description.

**MILL SUPPLY DEPT.,**
**MR. A. W. ANGELL, MGR.**

## SHAMBOW SHUTTLE CO.

**WOONSOCKET, R. I.**

MEECO
Metal Equipment For Shop And Factory

**OUR LINES:**
**Sanitary Wash Bowls (in Batteries), Bubbling Fountains (Plain and Ice Cooled), Metal Lockers, Metal Stock and Pattern Storage Racks, Metal Shelving, Metal Cabinets, Vault Fixtures, Soda Kettles (40 and 60 Gallons), Metal Stools and Chairs, Water Mixers, Work Benches, Bench Legs, Full Line of Plumbing Fixtures, Etc.**

## EQUIPMENT Will Help You to Keep Labor Contented and Permanent

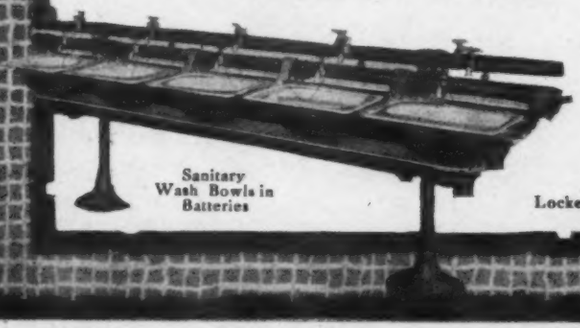
It is just such equipment as this that helps you to keep employees' good-will—that solves the labor problem by making them stay with you.

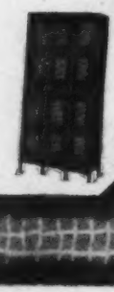
Employees appreciate clean, cool drinking water—clean wash basins, good clothes lockers, sanitary toilets, and the like, and you could make no better investment at this time than to seriously consider the installation of one or more of the MEECO Employe-Keeping Equipment.

MEECO Ice Cooled Drinking Fountains are now being used in hundreds of mills, as well as MEECO Steel Lockers, Sanitary Toilets, Wash Bowls in Batteries, Steel Chairs, etc.

**Do Not Delay—Get complete catalog of this valuable equipment.**

**MANUFACTURING EQUIPMENT & ENGINEERING CO., 135 Federal St., Boston, Mass,**
**Address all letters to Framingham, Mass.**


Sanitary Wash Bowls in Batteries


Lockers

# COTTON

Published Monthly by

W. R. C. Smith Publishing Co., Dalton and Atlanta, Ga.

L. L. ARNOLD, Editor.

Editorial and Advertising Departments, Grant Building, Atlanta, Ga. Subscription price, $1.00 per year; Canada, $1.50 a year; Foreign, $2.00 a year. Entered at the Dalton, Ga., postoffice as second-class matter.

Contributions to the columns of Cotton are solicited and paid for after publication. The names of contributors need not necessarily be used, but must accompany all manuscripts.

Orders for any change in advertising must reach Atlanta previous to the tenth of the month preceding month of issue, otherwise publishers cannot be responsible for changes.

When changing address, notify us, not the postmaster. Always give the old address as well as the new one.

Member Associated Business Papers, Inc.

Member Audit Bureau of Circulation.

Volume 83. Number 12.


## ADVERTISING PAGES OF THIS ISSUE.

This number of COTTON, besides reaching our regular readers, is being distributed at the World Cotton Conference at New Orleans. We have endeavored to pubish a number that would be of interest to all of the delegates, both domestic and foreign, one indicative of the vast, progressive industry which COTTON serves.

Approximately four hundred companies serving the cotton industry, are using the advertising pages of this issue to make an announcement of the products and service they have to offer.

These manufacturers are employing the best engineering service that can be secured, are spending millions of dollars each year investigating the problems in the cotton industry, inventing and perfecting machinery and equipment that will increase efficiency and output of the mill, that will cut down labor costs and increase profits. The resulting equipment and service they are able to furnish you are announced regularly in their advertisements.

The readers of COTTON, the delegates of the World Cotton Conference and all other men interested in the cotton industry to whose attention this issue may come, will find it of value to read the advertising pages carefully, as well as the reading pages, and preserve the issue for future reference.

## TANGIBLE RESULTS.

While telephoning a Southern cotton mill today, they advised they had just placed an order amounting to over $100,000 with an advertiser in COTTON. Two years ago this manufacturer was practically unknown in the textile field. Today they are receiving many such orders. A good product, properly advertised, is the answer.

## CONTENTS.


EDITORIAL—

Some Phases of the Railroad Situation ..... 753

Hazard of the Common Wooden Shingle ..... 757

GENERAL AND TECHNICAL—

Mostly because Dollars Mean Dividends ..... 758

A Peep Over the Fence ..... 761

How Will You Vote? ..... 767

New Orleans—Its Wonderful Port Facilities ..... 769

The World Cotton Conference ..... 775

And In the Meantime ..... 781

Who's Who Among the Delegates ..... 782

Atlanta as a Cotton Waste Center ..... 787

Union Cotton Warehouse Corporation Plans ..... 789

Designs for Fancy Cotton Fabrics ..... 791

The Manufacture of Domets ..... 794

Sanitation in the Modern Factory ..... 797

What the Southern Mills Are Doing ..... 801

The New England Mill Situation ..... 804

The Yarn Market ..... 806

Cotton Comment ..... 807

Lancashire Notes ..... 808

Notes About Men You Know ..... 810

"Wash" Answers "A. B. C." ..... 813

A Suggested Marking for Reeds ..... 813

Grinding and Setting Cards ..... 813

Handling the Occasional Export Inquiry ..... 825

KNITTING SECTION—

The Knit Goods Market ..... 843

Decreased Production—Higher Cost ..... 849

Hosiery Exports ..... 850

Knitters Meet at Whittle Springs ..... 851

President Johnston's Address ..... 857

Among the Knitting Mills ..... 861


## SPECIALIZATION IN ADVERTISING.

In an age of specialization, Advertising cannot afford to lag behind, and it isn't. Today, over 170,000 advertisers in trade and technical papers are demonstrating that—advertising which is carefully aimed and focused on their markets and their markets only, pays large dividends in proportion to the comparatively small investment.

If you have merchandise or a service appealing to a certain group, specialized advertising is clearly indicated. In every trade and industry there are strong influential publications, in which you can talk to your prospects exclusively, about their problems, in their own language, and in the papers which have the preferred entree to their interest and attention.

They cannot offer you impressive circulations, but the concentrated buying power of many of these groups staggers the imagination. The readers of one business paper have an annual turnover of more than ten billions of dollars, and yet its space averages but $60 per page.

The A. B. P. has established high standards of business paper practice, not excelled and seldom equalled in any field. Its members include ONLY such publications as can subscribe to these standards. When you see the words "Member of The Associated Business Papers, Inc.," remember that it stands for adherence to all other approved publishing methods in addition to certified circulations.

THE ASSOCIATED BUSINESS PAPERS, INC.,
220 West Forty-second St.,
New York City.

COTTON is a member of the Associated Business Papers, Inc.

## SCALE — AND THE CURE

Boiler scale cannot be prevented from forming, but there is a way of removing it easily. The answer—to use

## DIXON'S PIONEER BOILER GRAPHITE

It is introduced into the boiler feed water. The particles work their way through the minute fissures of the scale, lubricate the scale, so to speak, and greatly facilitate subsequent cleaning by ordinary methods. Once clean, scale cannot again burn fast to the metal.

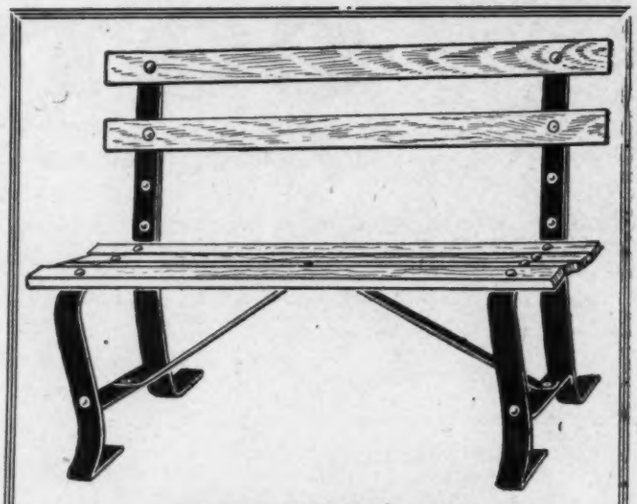
Both time and labor costs are cut in half, and cleaner boilers are the result.

Graphite has no taste or odor, nor is it soluble. It does not prevent the use of live steam for cooking or washing. It does not destroy gaskets, valves and fittings on steam lines.

**Write for Booklet No. 34-T and further information.**

**JOSEPH DIXON CRUCIBLE COMPANY**

**Established 1827**



# SETTEES

## AND SWINGS FOR PLAYGROUNDS and PARKS

LOW PRICES QUICK SHIPMENTS

We also manufacture Wire and Iron Window Guards, Stall Guards, Hay Racks, Oat Mangers, Etc.

**DOW WIRE & IRON WORKS**
INCORPORATED
LOUISVILLE, KY.

**JORDAN MANUFACTURING CO.**

**BOBBIN MAKERS**

**Home Office and Plant No. 1**

**MONTICELLO, GEORGIA.**

# GARLAND

LOOM PICKERS

LOOM HARNESSES

TRADE MARK

## GARLAND MFG. CO.

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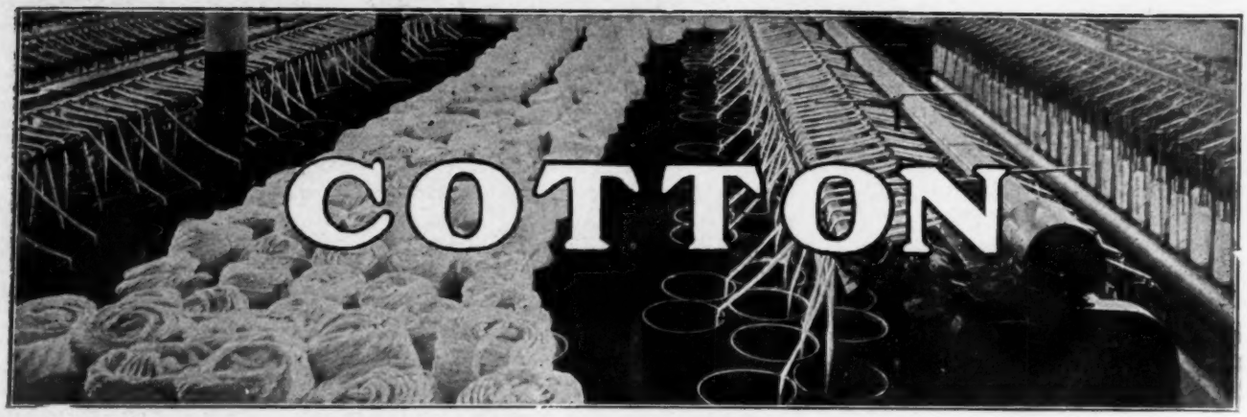



October, Nineteen-Nineteen:

# Some Phases of the Railroad Situation

**There is probably no problem before the public today that so vitally affects all business and indirectly all the people of the nation as does the problem of the railroads. About the time that this number of Cotton reaches its readers, one or more of the numerous plans suggested as an aid in its solution will be submitted to Congress. It is a time for cool thinking and a clear enunciation of individual beliefs on the part of every manufacturer. It is the duty of each to advise his Congressman what he thinks—and why. In an endeavor to place the cogent facts before our readers, we have asked William A. Wimbish of Atlanta to prepare a series of concise and unbiased discussions covering the main points at issue.**

**Mr. Wimbish ranks among the best lawyers of the South, and during the past decade has devoted his recognized ability largely to cases involving railroad rates, classifications and regulations. He has been a member of the Bar of the Supreme Court of the United States for twenty years, and has successfully conducted several leading cases before this tribunal. He has personally appeared and argued cases in the U. S. Circuit Court of Appeals at New Orleans, Atlanta, Louisville, Richmond, St. Paul and San Francisco, and enjoys the distinction of having been called across the continent to conduct important litigation arising in Seattle, Washington. Mr. Wimbish recently represented the Southern Traffic League, which is a union of trade and traffic organizations, large corporations and firms who are large shippers throughout the South, before the House Committee on Interstate and Foreign Commerce. He is a member of the American Bar Association and was for some time vice-president of that Association for Georgia.—The Editors.**

## What Shall Be Done With the Railroads?

Among the problems pressing for solution in this post-war period, I venture to say that none is of greater consequence and deeper concern than that affecting the future operation and control of the railroads.

In times of social unrest there is a strong tendency to shake loose from hitherto accepted standards, and swing the pendulum too far in the effort to find a new balance. The sum of experience expressed in the accumulated wisdom of the ages is apt to be too lightly regarded. Untried remedies are proclaimed as specifics for old ills. The occasion offers opportunity for the display of all sorts of eccentricities and the vaunting of decayed theories in fresh disguise.

From this disturbing influence the railroads cannot be exempt. The very fact that the service of transportation so intimately affects the life and welfare of all of the people seems to fascinate the imagination of the doctrinaire and the visionary, and tempt the cupidity of the selfish and the vicious.

The subject is one that peculiarly calls for cool thinking and the utmost honesty in its treatment. Sound hearted, clear headed business men, such as those to whom this article is addressed, can and should exert an effective influence upon the right solution of this question.

The control and operation of our transportation system is not a matter of merely private interest, but is essentially one of public concern. The railroad is an indispensable instrumentality of commerce and industry. So long as private ownership of property devoted to the public use is permitted, the property rights of such owners must be respected. Nevertheless the railroad must be operated pri-

marily in the interest of the public which gave it life and power, and which continues to sustain it. An enlightened conception finds no conflict in the true interest of the shipper, carrier and the public. If, however, such seemingly arises, the interest of the public is paramount and must prevail.

The public interest demands the most efficient service that can be rendered under charges that are just and reasonable for that service. For the means of performing this service the railroads are dependent upon their revenues.

Intelligent shippers recognize that the railroads cannot obtain the necessary revenues without adequate earnings. They want the railroads to prosper so that they may be able to render prompt and efficient service to the public and earn a fair return upon their investment. To this end shippers and the public are willing to pay such reasonable rates as may be necessary. They well understand that a railroad is wholly dependent for its revenues upon the rates and charges exacted; it neither produces nor deals in any commodity; its whole function is limited to performing a service consisting in the movement of persons and things from place to place.

On the other hand, the right thinking public is unalterably opposed to any exploitation of the railroads or their revenues by or in the selfish interest of any class. The public will not submit to the demand of capital that any given rate of return on investment shall be guaranteed, without due regard to the value of service rendered; nor will it for a moment tolerate the dictate that the railroads shall be controlled by and operated in the interest of organized labor. Neither will such operation of the railroads as will specially favor what may be called the managerial class of railroad officials, be approved. Educated public opinion insists that labor shall be paid a fair wage for its work; that the carrier shall receive adequate compensation for the transportation service rendered; and that beyond this, the railroads shall be operated in the interest of that larger public which includes all shippers and consumers as well as the carriers, and those who own and operate them.

Not only is a railroad an essential public facility, but it is also a monopoly in its nature. The power to levy rates upon the necessities of commerce is closely akin to the power of taxation; and the power to tax involves the power to destroy. In the absence of some effective limitation upon the exercise of this power, the public would be without protection against exorbitant rates and inferior service. For a long time it was thought that competition alone would compel reasonable rates. It was found, however, that unrestricted competition was susceptible of great abuse, and many evils grew up, chief among which were unjust discriminations. To remedy these abuses it was found necessary to place the railroads under legal restraint, and at the same time encourage the play of normal competition.

A brief review of the effect of public regulation upon the railroads will give a clearer perception of their true situation and the character of the relief that may be called for.

### The Railroads Under Public Regulation.

It seems as if those of the old regime of railroad men cannot become fully reconciled to public control of their rates and revenues. Some of them continue to indulge the notion that a railroad is the exclusive property of its owners, and that its operation is a matter of private concern to which the public service is incidental.

After some quiescent years, the recrudescence of this resentment appeared in 1910. Since that time some have been diligent in spreading their propaganda, with the effect of creating a popular misconception and of hurting their own credit.

This attitude finds expression in charges so positively asserted, so frequently repeated and so widely disseminated as to lead the public to believe that much injustice has been done the railroads. It has been charged, among other things, that public regulation has failed; that under public regulation the railroads were starved and were being driven toward bankruptcy; that the policy of these regulatory bodies was so unfriendly as to deprive the railroads of ability to earn sufficient revenues to maintain their properties in good operating condition and earn a decent return upon their investment; and that as a result of this harsh treatment the transportation system of the country had broken down, and was only saved from utter wreck by the intervention of Federal operation and control.

If these things were true, radical remedies would be called for and our system of public regulation would have to be discarded. Fortunately for both railroads and the public these charges are founded upon false assumptions.

Never in their history have the railroads been so prosperous, or their physical properties in better operating condition, as during the period from 1910 to 1917. During this period the dividend paying railroads of the United States, constituting about two-thirds of the whole, declared and paid average annual dividends in excess of seven per cent. The average income per mile of road was greater than in any preceding year; and the accumulate dsurplus was increased more than ninety per cent over and above dividends paid.

The three last years of private operation—1915, 1916 and 1917—marked the highest attainment in the history of American railroads. The average earnings during those three years of all Class One American railroads upon their stock capitalization, after deducting operating expenses, taxes and fixed charges, has been estimated to have been more than six per cent, and for the year 1917 more than seven per cent.

It is very clear then that under public regulation the railroads of the country were not headed toward bankruptcy, but were enjoying a fair degree of prosperity.

The evidence is equally clear and convincing that our transportation system had not broken down physically. Mr. Daniel Willard, president of the Baltimore & Ohio Railroad, in his testimony before the Senate Committee said that he could not agree with those who assert that the railroads under private ownership had broken down; on the contrary he says that the record of actual performance is convincing evidence that the railroads were in fact most efficient agencies of transportation. Mr. Ernest Kruttschnitt, chairman of the Board of the Southern Pacific Railway, told the Committee that American roalroads under private management never broke down nor failed to render the service expected of them, but on the contrary gave service that has never been equalled in the history of transportation. Mr. Frank H. Fayant, Assistant to the Chairman of the Association of Railway Executives, who recently made a careful study of European railway systems, declared in a published statement that while our system of public control had its obvious faults, under it was developed the most perfect transportation machine in the world.

From all of this it follows that the charges made are not sustained by the facts, and that under private operation, subject to public regulation, the American railroads as a whole were financially prosperous and physically strong. Of course, there were exceptions; but this was due to causes other than public control. It may be remarked in passing that the railroads in the South were prosperous beyond those in any other region of the country.

What I wish to stress here is that whatever scheme of legislation may be adopted extreme care should be taken to preserve the benefits of a system that has worked so well. Nothing should be permitted that would lessen the force of normal competition, or relax the exercise of the power of public regulation. Without these wholesome restraints, which have proven beneficial to both carriers and shippers, the public would be deprived of protection against arbitrary methods on the part of those who operate the railroads.

### The Problem and Its Remedies.

If the railroads could be returned to their owners under conditions similar to those which existed in the pre-war period the problem would be comparatively simple. Changed conditions, however, must be reckoned with.

The war emergency constituted the only justification for the seizure and operation of the railroads under Federal authority. The purpose of this seizure has been accomplished with more or less success, but at heavy cost to shippers and the public. The burdens of transportation have been seriously increased. The service has deteriorated and the customary flow of traffic has been interfered with. In so far as the carriers are concerned they have been protected against financial loss during this period by reason of the guaranteed return. The government is under obligation to and doubtless will return the railroads in as good physical condition as when received. From these aspects of the case, then, the carriers have not been the sufferers. Nevertheless it is true that the railroads will be returned subject to much higher operating costs than when taken over. As against this freight rates and passenger fares have been advanced about thirty per cent. Whether these advances in rates will afford adequate compensation for increased costs remains to be seen. The carriers ought to be able to operate their properties more economically than they were operated under Federal control. The volume of traffic, after a temporory depression, appears to have revived and the present indication is that it will increase rather than decline, at least for some time to come

Necessarily difficulties will attend a readjustment of our transportation system to the change from public to private operation; but these do not appear to be insuperable. The railroads claim that they are entitled to protection against loss during this period of readjustment, inasmuch as their properties were taken from them without their consent and their long established organizations were suddenly disrupted. Perhaps there is merit in this claim. If so, it can be satisfied by appropriate temporary expedients rather than by radical legislation.

The attitude of labor presents a real menace which is not to be ignored. I see little upon which to predicate the hope that high costs will be substantially reduced for some time to come. Many causes contribute to this result, some of which may be relieved; but so long as currency and credits remain inflated, costs and prices will continue correspondingly high. Labor continues discontented and only thinly veils the threat that higher wages must be paid under penalty of strikes such as will paralyze all transportation. It is easily seen that increases in wages implies advances in freight rates which will be reflected in higher living costs, necessitating other increases in wages and advances in rates, and thus what is termed a "vicious cycle" will continue in its revolution.

Railroad executives and security owners seem to think the time opportune for such legislation as will advance their interests. I do not share the opinion that a return of the railroads to private operation, without such remedial legislation as they suggest, would result in wholesale bankrupteies and receiverships for the railroads. Doubtless there are railroads which, because of unfavorable location, over-capitalization, or other adverse conditions, will not be able to survive.

Many plans have been submitted and urged upon the attention of Congress. They are entirely too numerous and my space is too limited to discuss either of them in any detail.

The demands of labor are supposed to be expressed in what is known as the Plumb plan with its provisions for tri-partite control. I shall assume that this plan carries its own condemnation to your mind, and therefore will dismiss it without discussion. Nor shall I stop to consider any plan that contemplates government ownership and operation of the railroads.

Several of the plans which seem to have gained some popular favor present as their keynote a proposition that is not far removed from government ownership, and that is that some sort of governmental guaranty or assurance of definite return upon invested capital should be given. This is a most insidious and dangerous fallacy, which I shall endeavor to briefly expose.

### The Fallacy of Guaranteed Return.

Some of the advocates of a guaranty propose that it shall be accomplished by means of such rate adjustment as will yield on the average a given percentage upon the aggregate property investment of the railroads; while others with better logic advocate a direct guaranty by the government whether or not earned by the railroads.

Those who advocate government ownership can well afford to accept a guaranty of return, under whatever guise, as an expedient to that end. As has been said by Senator Cummins, when the government undertakes that the return upon capital invested shall be certain, that is guarantees the return, whether by legislative assurance or by explicit obligation, it may well be termed the equivalent of government ownership. That any such guaranty would eventuate in government operation as well as ownership seems inevitable. Government ownership with private operation under a guaranty of return would cast such obligations upon the government and so dull the incentive of private operators as to leave little doubt in the mind of any thoughtful man concerning the outcome. Without ownership in the property and with a return guaranteed to the operating company, it must be evident that small inducement would be offered for the display of energy or initiative, and competition in both service and charges would disappear.

Even if it were otherwise the objections to a guaranteed return are equally cogent. Some stable basis of value must be found as a requisite for arriving at any percentage of return. This basis may be capitalization, or property

investment account, or the value of the railroad otherwise ascertained.

Whatever basis be adopted it is obvious that the values of the different railroads would present great variations and disparities. If capitalization be taken as the basis, a premium would be paid the over-capitalized roads as a reward for their extravagance, while those more conservatively capitalized would suffer a disadvantage because of their very prudence and good management. Should the property investment account of the railroads be taken, as is most generally urged, the basis would be even more unequal. The property investment account or book value of a railroad represents neither the actual investment nor the present worth of the property employed in the operation of the railroad, but is the aggregate of many items of accumulated cost through a long series of years, including the outstanding stocks and bonds at not less than par, regardless of what may have been paid for them, or what they are worth.

The nearest approach to equality would be to ascertain the value of each railroad and its properties upon the basis of reproduction cost less depreciation, or some other like method. The overwhelming objection to this is the time and expense involved, and the fact that the valuation when arrived at would be neither accurate nor constant. Future fluctuations in the cost of labor and material would subject any physical valuation to such recurring changes as would require periodical revaluation; hence the standard would be both uncertain and shifting.

These defects are so obvious that they could not be ignored by those who favor a guaranty. It was recognized that under this plan favorably located and well managed railroads, which constitute the majority of the roads of the country, would receive excessive earnings under rates made such as to yield the guaranteed returns to the less favorably circumstanced railroads. In the effort to overcome this objection it has been proposed that the railroads in each region be grouped into a few large systems, either permitting or compelling the strong roads to take over the weaker lines, thereby preserving a general average; or by taking the excess of earnings of the prosperous lines and applying them to the benefit of those less prosperous; or by appropriating such excess to the indirect benefit of carriers, employees and shippers. The very fact that all these plans contemplate that well managed railroads would receive excess earnings necessarily implies that the shipper would be required to pay more than the service was worth, and more than the particular carrier was entitled to retain.

In other words, such exorbitant rates are to be exacted from the public as will yield excessive returns to the greater number of railroads in order that the less favorably situated roads may enjoy a return extravagantly beyond that which would enure to them under just and reasonable rates for the service performed. The whole public is to be enormously penalized to make up for the shortcomings of those railroads that have been unwisely built, improvidently managed, or inefficiently operated. This ought to be sufficient to condemn any such plan.

The proposition for compelling or encouraging the merger of weaker into stronger lines does not appeal to me. All averages are attained at the expense of the superior factor. An infusion of anæmic blood into a vigorous body cannot improve the health of the system.

Even if some just valuation upon which to base a guaranty could be found the problem would still be impossible of practical solution without a violation of established economic principles.

A direct guaranty by the government would be simple in its terms, but this would involve payment out of the Treasury of the United States of the deficit in earnings incurred by any railroads. The burden would fall upon the tax payers throughout the country. This, of course, would be a subsidy and would be fraught with the evils that attend all such public bounties. The payment and acceptance of that which has not been earned is ethically wrong and economically unwise. As applied to the service of transportation it neutralizes the antiseptic of competition and paralyzes the initiative and imagination that is indispensable to progress.

Legislative assurance of any given return to be accomplished through the medium of rate adjustments is pregnant with even more mischief and danger.

Suppose the regional incorporation plan be adopted, and all of the roads in that region be treated as constituting one system for rate making purposes. Assuming that the basis of valuation and the percentage of return have been arrived at, insuperable difficulty arises when it is undertaken to construct rates that will constantly yield the required return. The same rates will produce very different net operating revenues in different years, owing to various transitory causes. Rates that will produce satisfactory returns in one year will prove inadequate in another, and liberal in still another year, owing to variations in the volume of the tonnage, the character of the traffic and the operating ratio.

It is thus apparent that in order to maintain a net ratio of return the rates must from time to time be readjusted so as to respond to the frequently recurring variations in these factors. Anyone at all familiar with the subject knows that stability in the rates is scarcely less important than the measure of the rates. Frequent, or even occasional. fluctuations in the rate level would be demoralizing to commerce.

Surely the cure for existing evils does not lie in overfeeding the many prosperous lines in order to stimulate the vitality of those less prosperous. Such palliative treatment would in the end only aggravate the trouble. What the case calls for is surgery. The valuation and capitalization of these languid lines should be cut down to such reasonable basis as will permit of a fair return under just and reasonable rates. Of course, I do not advocate confiscation. Perhaps a practical plan might be evolved under which the government would extend aid to meritorious lines upon condition that those which are too heavily capitalized to earn a fair return under just and reasonable rates should consent to such reduction in their capitalization as would be approved by the Valuation Board of the Interstate Commerce Commission. This aid might appropriately take the form of a direct loan at low rates of interest, with a small annual sinking fund requirement sufficient to amortize the loan within such time as the exigency of the case may require.

### Fundamental Principles.

The underlying principle which should not be departed from is that the carrier is entitled to a fair return upon the value of that which he employs for the public convenience, to the extent that this can be accomplished under rates that are just and reasonable to the public. In any rate structure the first effort is to determine what the services to be rendered are reasonably worth, and translate such measure

of value into the rates to be charged. That the carrier should have a fair return upon the value of his true investment is greatly desired; that he shall receive just compensation for the transportation service rendered is imperative; that no more may be exacted from the public than the services rendered are reasonably worth, is a limitation that may not be exceeded. If the carrier cannot operate profitably under reasonable rates, it is a misfortune that the law cannot remedy by imposing unjust burdens upon the public.

In determining what is just and reasonable as between the carrier and the public, the cost of the service to the carrier as well as the value of the service to the public, must be considered. An element entering into this cost of the service is the value of the property employed in performing it. A fair return upon the property investment is one of the factors to be considered, but it is not the single or even the dominant factor. If rates are to be fixed solely upon the basis of a fair return upon the value of the investment, the paramount right of the public to demand that no more be exacted from it than the service rendered is reasonably worth, would be completely subordinated.

My purpose here is to sound a note of warning against the danger of radical departures from economic principles. The current of economic law, like the flow of water, may be diverted, but it cannot be permanently obstructed without disastrous results. Should the railroads of the country be grouped into a few large systems, and an arbitrary rule of rate making, designed to guarantee a minimum return upon aggregate values be adopted, it is plainly to be discerned that every other interest of the country would be subordinated to that of the railroads.

Our system of public regulation is far from perfect. Let us observe and correct its faults, rather than cast aside the structure that has resulted from long experience, and under which the railroads as a whole have been fairly prosperous. Above all things let us avoid such governmental undertaking or assurance as will create a strong favored class with power to subordinate all other interests to its own.

Let the railroads be treated not only fairly but liberally. Let them have such rates as will be adequate to their reasonable requirements in order to serve the public efficiently. But do not venture upon any arbitrary rule of rate making that ignores the rights of the public, and that will permit the exaction of exorbitant charges out of proportion to the value of the public service rendered.

If it be found that in any region the railroads cannot secure adequate compensation for their services under existing rates, such rates should be advanced. In the meantime, during this transition period, it would be much wiser to extend temporary aid by direct loans from the government rather than to give the railroads a roving commission to replete their treasuries by burdensome levies upon the commerce of the country.

## Why Not?

Sam Blythe in a recent article in a popular weekly has suggested that we nominate a business man for president. We have had lawyers, soldiers, college professors and politicians—principally lawyers and politicians. Why not try a successful business man for a change?

## Hazard of the Common Wooden Shingle.

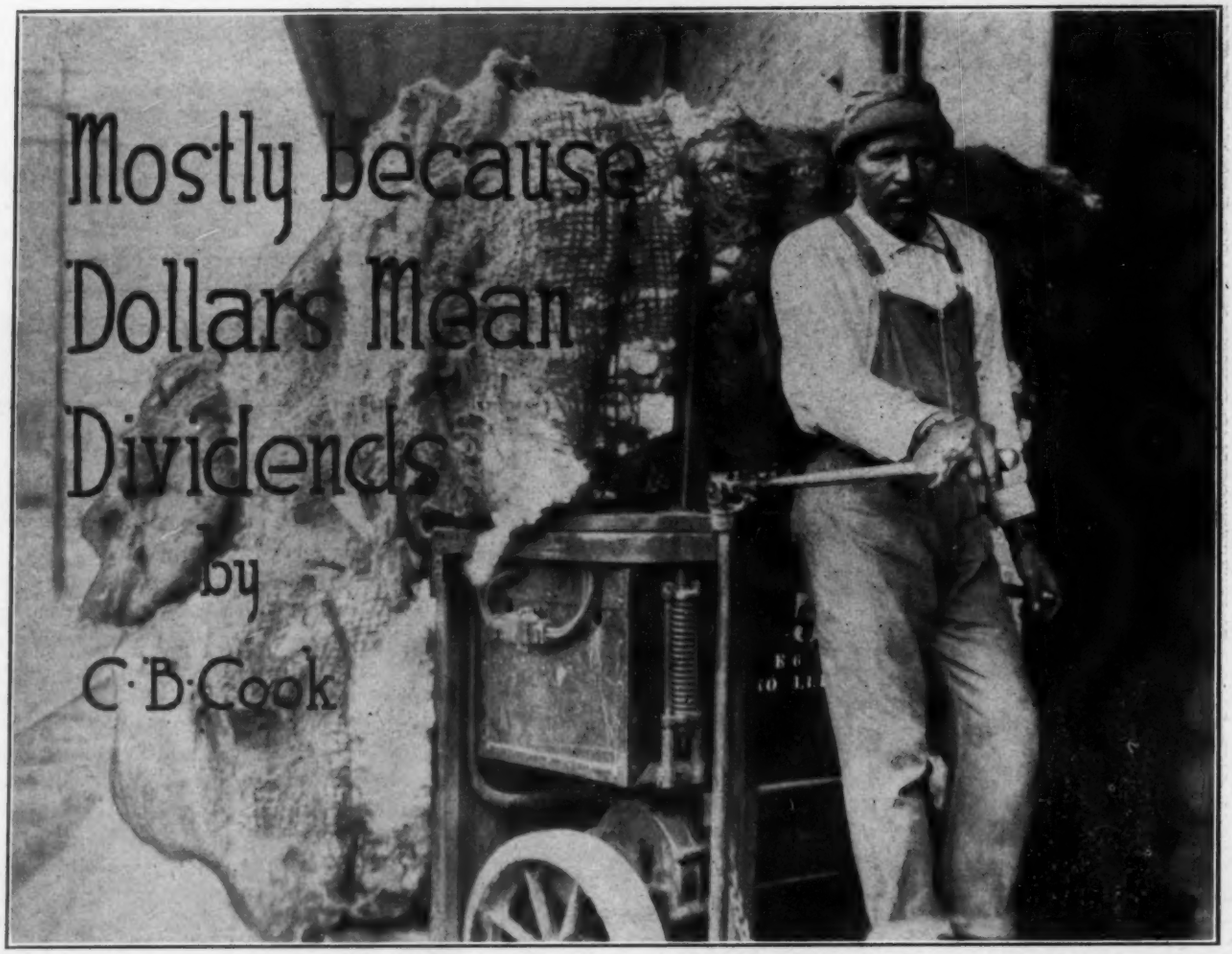
Assurances were given recently in the report of the National Lumber Manufacturers' Association that the influence of that important body is to be exerted to develop fire retardant treatment of wooden shingles, improvement in their weight and quality, and their exclusion from thickly settled districts. Bad reports on the common variety continue to come in. Salt Lake City was visited by 304 fires in buildings last year, and fifty-one of them, or seventeen per cent, were due to blazes originating from wooden shingle roofs, according to the annual report of Fire Chief W. H. Bywater, who recommends to the City Commission the enactment of an ordinance prohibiting the use of wooden shingles in building roofs. Cotton manufacturers who are still using the common wooden shingle in their mill villages should heed these warnings and talk to their neighbors who have village roofs covered with a fire resisting material.

Great interest has been exhibited recently in the work of producing Algin from kelp, now being undertaken by the Hercules Powder Company. With the cessation of war business, this company has turned its thoughts from the manufacture of chemicals needed in the production of munitions to products having a more definite peace time application. Algin is of especial interest to textile manufacturers. Much has been written in the various standard text books on textile finishing, calico printing, etc. about the use of Algin, but so far in this country, at least, its manufacture has never been put on a practical basis. Some spasmodic attempts have been made to put this industry on its feet, but these attempts have depended upon the capricious nature of the tide or wind to bring in the necessary kelp and deposit it on the beach. Through the experience in kelp harvesting this company gained in connection with war work, it is able to obtain a fresh supply of kelp daily at a very low cost, and is thus enabled to produce an exceedingly good grade of Algin at a low manufacturing cost.

Algin is the name originally given by Stanford to the rubbery vegetable gum which is the principal constituent of the kelp plant. Solutions of Algin possess an extremely high viscosity and a very great covering power. The sodium compound of Algin is soluble in water, whereas the aluminum compound is insoluble in water, but soluble in weak ammonia, and is used extensively in England for the waterproofing of textiles. The compounds of Algin with copper, cobalt, and nickle, have the color of their metallic bases, blue, red, and green, respectively.

The following report of a mill fire was clipped from a recent insurance record: "A bearing on the exhaust fan in No. 2 Mill became overheated and caught fire. This blaze was supposed to have been extinguished, but later the watchman discovered fire in the roof around the discharge pipe from the fan. The contents of fire pails were used in putting out this second fire. The damage resulting was slight. No claim."

While the damage resulting from this fire was slight, it was simply a matter of chance and not because of the foresight of the management. Fan bearings of the Hyatt roller bearing type, or equipped with suitable ball bearings, do not become overheated and cause fires.




Every factory has some certain place in which a large saving may be made in overhead costs, in operating costs, or both. One of the places in which most plants, especially the textile mills, can make this saving is in the handling of materials. When a plant is small, the trucking problem is not such an expense and worry, but as the business grows and spreads out and larger accommodations are built, the methods of transporting raw, partly finished and finished products must be looked after. Since the end of the war, and while the war-inflated wages now paid by the textile industries are in force, and with constant demands coming from the help for shorter hours, the managers of the mills must realize that in order to make a factory pay fair dividends, modern machinery and methods must be installed. Since the entrance into the manufacturing world of industrial trucks and tractors, it is readily seen that these machines may be the means of reducing the payroll expense, of saving man labor and costly minutes, as well as removing some of the physical strain placed upon the operatives by the old methods.

The old fashioned truckman seems to think that in order to live up to his position, he must forever be pushing a hand truck around. Some of these trucks weigh from 100 to 250 pounds, depending upon the bulk of material and whether loaded or not, but there is always the dead weight to push around. These hand trucks are all of the unimproved type, and tend to sap the vitality of a man and make him of less value for a time, after a hard day's work, or until he has had a chance to rest.

Here is where the industrial truck and tractor, with storage battery power, come in as a big factor of saving. The textile plants of this country present to them an enormous field in which to exhibit their time and labor saving powers. Practically every textile mill is arranged, or can be with slight alterations, so that these trucks will prove of great advantage.

Modern tractors are designed to pull trains of trailers heavily loaded or stacked with goods which may be comparatively light but bulky. Elevating trucks are made to run up under a load placed on specially constructed holders, carry it away, and deposit it in another department of the mill, requiring the labor of only one man to do all this work! All these machines have been developed to a high state of efficiency. An outstanding feature of some electrically controlled tractors and trucks is the manner of construction, which allows the changing of 98 per cent of the parts of one truck onto another. One advantage of this "interstandardization" is the ability to change a two-wheel drive truck into a four wheel drive by merely adding the fixture making the back or dead axle into a live one with all the propelling capacities of the front axle.

The load carried by one of these trucks is equal to that carried by six to ten men, and will carry it about three times faster, with no extra expenditure of labor. Such trucks, with ordinary care, will last about ten years. They know no boss, have no meal time other than the recharging of the

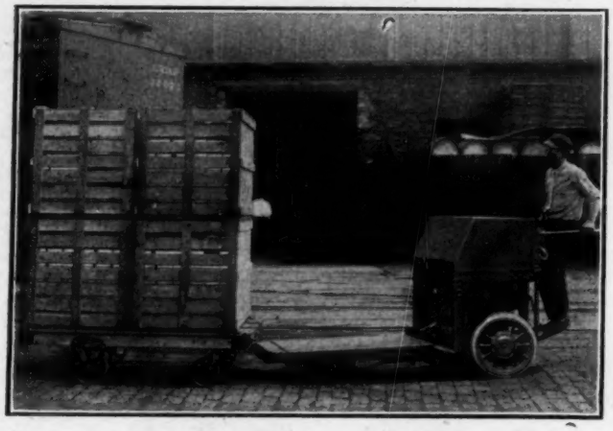
*Manager Sales Promotion Dept., The Elwell-Parker Electric Co.

batteries, need no rest, never "want to take a day off", and eliminate expensive overtime. Consider the cost of moving machinery on Saturdays, Sundays or holidays when this work is usually accomplished so as not to interfere with production. Many trucks have saved their cost on this work. These are some of the advantages of these sturdy little mechanical "stevedores."

Such trucks are now built to ascend a fairly steep grade. No ordinary man can push a hand truck up a 15 per cent grade and the services of three or four men are often required to do this, extra help usually being furnished by high priced machine operators who happen to be located near the incline. The electric truck carries a load of one or two tons up the grade, requiring the attention of only one man, and gets it to its destination about three times faster.

Modern trucks are equipped with specially constructed brakes, so that an incline may be descended in safety or the truck stopped when ascending and started on the incline without first descending to the foot; or a loaded truck may be stopped within its own length while traveling at a high rate of speed. They can operate backward with the equal facility as in operating forward and can be turned around in a very short radius.

The elevating platform truck is that which, after having



A LIFT TRUCK IN ACTION.

"self-loaded" or picked up any load up to 4,000 pounds, transfers it at three times walking speed to the exact spot where it is wanted and unloads it electrically. This cycle of operations can be repeated as often as desired.

However, some provision must be made to keep the unit loads supported above the floor to permit driving the truck platform beneath. These may consist of parallel skids across which the goods rest, or may be wooden or steel platforms with skids attached or even platforms with wheels or casters.

Experience has demonstrated that a high platform lift is essential to give necessary clearance for load skids or supports; consequently, these trucks are designed for a 4½ inch movement with a 4,000-pound load up or down in ten seconds.

The source of power for both propulsion and operation of the lifting mechanism is a storage battery on the upper deck in a steel compartment with removable cover and end plates. The battery cells are assembled and wired in a single container removable as a unit, and it is not necessary to disconnect the wires and remove only a part at a time. To charge the battery in the truck, it is only necessary to part the plug and receptacle and insert the plug attached to the charging panel, or a discharged battery may be replaced by a charged one in five minutes.

The propelling motor is located in front of the operator and assembled on an axle carrying large diameter wheels. The large tires in conjunction with the supporting springs absorb shocks due to traveling over rough floors.

The drive wheels steer simultaneously with the pair beneath the loading platform so that when the latter are

A PLATFORM TYPE IN SERVICE.

turned to the left the drivers turn to the right, all four wheels traveling in concentric circles. Compensation for unequal wheel path radii is secured, resulting in a saving of both power and tires. Stability is only possible for a load when each wheel turns on its own knuckle supported by a rigid axle.

Since most of the load is carried by the axle beneath the platform the trailing wheels are of wide tread. The two heights of platform require wheels of different diameter.

A DUMPING BODY FOR COAL.

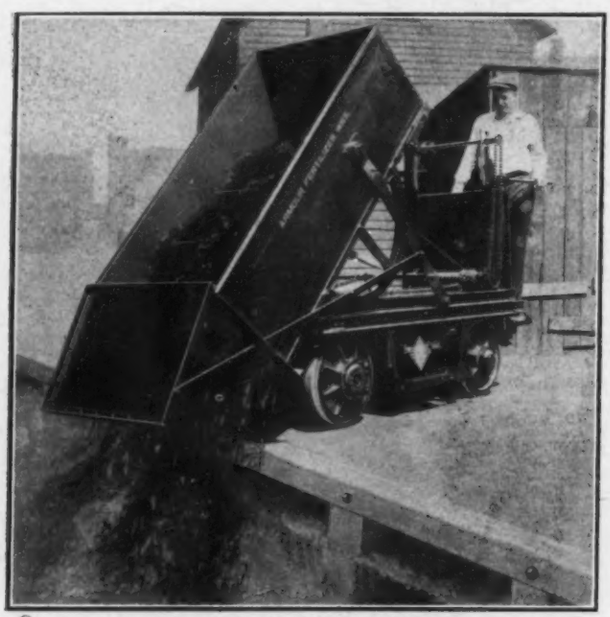
The length of the truck may be materially reduced when placing on elevators, due to the folding operator's platform, the removable controlling handle and the hinged steering lever.

A travel limit rod connects to the motor reversing switch and opens the circuit when the platform reaches either the

lower or upper limit of travel. To start the platform up or down it is only necessary to close the switch manually; the limit rod opening it at the proper point. In addition, and very essential, it is possible to arrest the movement of the platform at any point in its upward or downward travel by opening the switch by hand. This avoids damage to the goods or adjacent machines if the former are improperly placed on the platform.

Whenever the switch is opened the special brake on the end of the armature shaft stops the latter so the motor always starts from rest. This, with the clutch, makes it unnecessary to insert a fuse in this circuit.

The interlocking controller and circuit-breaker with independent brake operation and no fuses in either motor circuit insures safe and continuous service. The truck cannot be moved under power unless the operator is on it in position to control. The propelling motor will take all the current the battery will furnish. The function of both the propelling and lifting motors on these trucks, being entirely different, has required a special design for each. Consequently, each performs its particular work with the least



Another Type of Dumping Body.

amount of current; and a much smaller battery is necessary to accomplish a full day's work.

The maintenance cost of these machines is very small. There are no complicated bits of mechanism to get out of order easily. The expense of recharging the storage batteries is negligible.

While most of these trucks are four wheeled, with four wheel steering and either two or four wheel drive, a late development in this line is the construction of the three wheel tractor which has a single wheel steer. By this ingenious method of steering, this tractor can be turned around in almost its own length.

These trucks are easily operated. The brake and the circuit breaker are operated by pedals on which the driver must stand. On the tractors the circuit breaker is closed by the driver's weight on the seat, while the brake is foot operated. The speeds are three forward and a like number in reverse, and the safety of all employees is assured by a foot gong, electric bell or mechanical horn. The installation of such trucks will reduce the damage to goods while in transportation. The tires of the trucks are solid rubber, and the axles support the frame on springs, and there is no danger of turning over, as there is in the case of the hand truck.

There has been an increasing demand for trucks fitted with side or end dump bodies for handling coal and ashes at the mill power houses where these materials were formerly wheeled in barrows by hand. The handling of bales and beams has required platform trucks and tiering machines that haul as well as stack. A truck that will deliver directly into a car as well as to the tail board of a commercial truck, has proven a greater time saver in many plants.

Improvements are being made on these trucks every day and complete information and engineering advice costs nothing. The addition of several of these trucks to the transportation facilities of the average factory will prove a paying investment in dollars and dividends, through reduced expense and lightening of labor.

## A New Belt Appliance.

The Flexible Steel Lacing Company of Chicago has perfected and is manufacturing a remarkable new belt fastener, designed for heavy belting and made in sizes from 3/8-inch upwards in thickness.

The simplicity and strength of design of this new device, which has been named the "High Duty" fastener, have met with the unqualified approval of mechanical men to whom it has been submitted. The "High Duty" fastener embodies a new application of the compression principle as applied to belt fasteners. It consists of two rectangular steel plates, which clamp on either side of the belt and are connected by bolts which go through the belt. The top plate has two round holes which are countersunk to hold the special cone shaped nuts, while the bottom plate has two special square seats which fit around the square heads of the bolts.

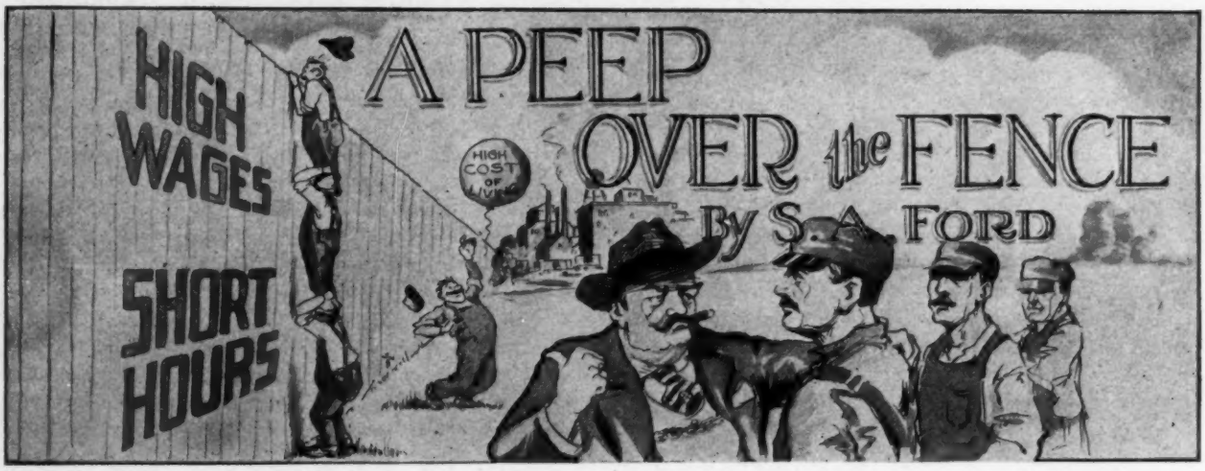
The tendency toward increasing thickness in conveyor

The "High Duty" Fastener.

belts has demanded a new type of joint as no satisfactory heavy fastener was available. The "High Duty" joint is simple to apply, it takes only a reasonable time in proportion to the size of the belt. The strength of the joint makes its modest cost a desirable insurance on the life of the belt. The sizes of the fasteners are in proportion to the thickness of the belt for which they are designed.

The requirements of conveyor service, elevator belts and heavy transmission duty at reasonable speeds have been carefully considered, and the "High Duty" fastener gives a joint of exceptionally high tensile strength, combined with the essential features of smoothness on both sides and an evenly balanced joint.

The illustration shown is from a photograph of the fastener and shows the construction of the upper and lower plates as well as the special bolt and nut.




Good management is dependent upon the quality of the labor with which it works. Labor is dependent upon the quality of the management with which it works. Notice that I say *with*; not *for*. To be successful with the labor problem, men must work *with* you. They will not work *for* you.

Here are two factors which are vitally dependent, each on the other. Does it not seem strange then, that they should continually be at swords' points? And yet in a general way neither factor is willing to acknowledge its dependency upon the other.

But there is one fact that cannot be denied. Efficient management cannot be carried on with poor labor. No system nor science of management can take the place of the man at the machine. Good help are an asset. They are worth money. They have a value just as a machine has a value. If you "fire" them, or surround them with conditions causing them to leave, then you destroy that asset. You cannot afford to throw away money, therefore you cannot afford to "fire" help.

I have seen it estimated that it costs from $50 to $300 to break a new man in on a job, depending upon the man and the job. I personally believe that when I broke in as an overseer that it cost the company more than $1,500 to break me in on the job but I can figure that I saved many times that amount *after* I broke in. But it costs the company something in cold hard cash every time a man is "fired." A manufacturer would consider it good economy to go to considerable trouble to save a hundred dollars on a machine. Why isn't it good economy to apply the same rule to hiring and discharging help?

Good employers have the faculty of getting men to work for them and when they go, of getting others to replace them. Good manufacturers have the faculty of getting men to work with them and of keeping them working with them. Therefore, try to be a good manufacturer and not simply a good employer.

Industrial organization has outgrown the one-man stage. The organization which combines the resources, the brains and the work of many men merged for one common purpose is the efficient organization.

To be self perpetuating, as all organizations should be, it must draw its leaders from the ranks of its workmen. There should be something beyond the mere incentive of the day's pay for such men, and the call of ambition and possibilities of future advancement supply it.

I have come to the conclusion that there is more politics in the management of many of our cotton mills than you will find in other corporations of equal size and value. The cotton mill is notorious for its "get the other fellow" attitude. Politics runs wild among the rank and file of employees and is played pretty strong among those higher up.

There are very few cotton mills whose organizations are self perpetuating. Once in a while you will hear of an overseer being elevated to the position of superintendent in the mill where he was overseer but in the big majority of cases you will notice that he goes to another mill. It is a common occurrence for a new manager to start in "cleaning out the old gang" very soon after taking charge of a plant. Sometimes this is necessary, but in many cases the "old gang" is not even given a chance to show that they are willing or able to give the new manager the support he wants. This is a matter of policy or principle with the company and should come from a source higher up than the manager or superintendent. This so-called "old gang" has a value as an asset of the company and if they are discharged or "fired," unless for a proper cause or just reason, the company loses money. A new manager would not think of throwing out old machinery and replacing it with new without first consulting those higher up. The "higher ups" would not stand for such an expenditure of their money because it would show directly in dollars and cents. But with help they consider it is different. They are not represented on their books as dollars and cents. An expenditure of ten thousand dollars for new machinery comes as a single item. An expenditure of the same amount of money to break in new help, coming in the form of increased repair expense and loss of production due to increased waste and second quality goods, is spread over a greater time and does not show as the cost of "firing and hiring." It is like the salesman's new overcoat. You cannot find it on the expense account but it may be there just the same.

What does all this amount to? You say it looks good on paper. What does it amount to? In practice it amounts to this. It is the basis of the ideal management policy. It is the heart and soul of the corporation. Somewhere I have read that "a company is known by the management it keeps." Also a statement by a successful corporation president to the effect that "if things continually go wrong between a company and its men, and you are looking for the trouble, first take a look at the general manager and officers of the company and then if you don't see anything—just take another look."

Corporations have spent but very little time or effort

in building up company character that will appeal to the men working for them. They have given little thought to the idea of building up their organization in such a way that men will be glad and proud to work with them because the company has a heart and certain ideals or principles that supply the men with the incentive to give their best in return for the square deal they get.

The labor problem is simply one of human relations. It is the problem of getting along with human beings. If workmen are an asset, then good workmen are a good asset and poor workmen are a poor asset. The problem for the company, then, to consider, is how to make their "help" a good asset.

Human nature is an almost inexhaustible source of surprises and perplexities and to attempt to discuss all its different sides is beyond the scope of these articles. But there are a few fundamental principles upon which human nature is built that so vitally influence the labor problem that I cannot pass them by.

The first and perhaps most important of all the principles affecting the labor problem is, that fully eighty per cent of the decisions we human beings make are made *with our feelings* and *not with our thoughts*. We may think a certain way but if we feel differently then we usually act as we feel and not as we think. Often we hear men say that something inside them tells them so and so, and yet they can see no reason for thinking so. What is that but their feelings that tell them so and so? You often hear of woman's intuition. What is it? She cannot tell why she should *think* so and so but she just cannot help *feeling* so and so.

Before we proceed further along this line I want to get this team hitched up so that the connection between the horse and the wagon and the load to be carried can be seen plainly by all.

Consider the ordinary team. It consists of a horse which is supplied with a tool called a harness, with which he puts the power stored up within him to good use. Then the wagon which carries the load and finally a reinsman who directs the efforts of the horse and sees that his labor is applied in the proper way. You have then the ordinary team. It is out to do business. It has something to sell. What is it? It makes no difference what kind of a load is carried. If it works, it serves somebody. Therefore, it has *service* to sell. If it cannot serve somebody it is no good. It has no excuse for existing.

And so it is with a cotton mill. No matter what it makes, the ultimate reason for its existence is that it may make something that will serve some useful purpose. In the industrial team the wagon is the buildings which house the organization. The harness is the combination of machinery which, through the skill of the operative is able to move the load. And the load which an organization carries is the production of some form of *service*. The reinsman in the cotton mill is the superintendent or manager. He it is who directs the efforts of the organization to the end that it may produce some form of salable service.

Service comes as the result of good management. Good management of necessity produces good service. The old idea of good management was the production of profits as the first and vital consideration. If low wages were paid and sharp practices were indulged in with the sources of supplies, if promises were made and not kept and deliveries held up or transferred, all for the one purpose of making profits, then it was considered good management.

But the modern idea of good management is different. To be sure it produces profits and must of necessity make money, but these profits come as the result of producing service of genuine value to the public, together with an honest product delivered when promised with a fair price and reasonable profit. Such a management does not forget that there are two factors which have a vital interest in such service. One is the public and the other the employees, who, combined, make it possible for the concern to prosper, and who are entitled to some share of the profits which could not be produced except for them.

The production of good service may be said to consist of the production of a standard high quality sold at an equitable price, manufactured under reliable promises and delivered as promised, together with a service to employees that builds up a permanent and contented working force.

The maintenance of quality standards is one means of insuring a permanent market and builds up a pride of product among the employees and officers which is a guarantee of the permanency of quality.

This then should be the one object of both the employer and the employee—the production of salable service—in which both are vitally interested, one just as much as the other. Then the question naturally arises as to the why and the wherefore, if both sides are so vitally interested in the production of service and it means life to each, why do they have so much trouble in their dealings with each other? Why are employees dissatisfied with their wages, hours of labor, etc.? Why will a man go home at night and work his head off for his friend next door who is building a chicken coop and then go to the mill next day and do about one-half a reasonable day's work? Why are employers continually complaining about their "labor turnover" and the poor quality of their "help?" Why does the employer complain of the return he gets for the wages he pays?

The employer, who hires a man for as little as possible, who takes advantage of a man's condition or circumstances to force down his rate of wages, cannot complain if the man takes advantage of his ability to give a small return for his small wage. And while I am speaking of this let me speak of another side of this same subject.

I know of a general manager of certain mill interests who openly boasts that he does not pay all he considers a man is worth. He admits he takes advantage of a man's circumstances in paying him. He tries in other words to keep a man's wages as low as possible. And if a man should go to him and ask him for more money that man would receive a black mark in that organization. He might have been considered a good man before. His record might be above reproach but if he should ask for an increase in wages it would give him a bad mark. He would not stand as high as before. And if he gives in his notice to go to a job paying more money then he is asked why he didn't give them a chance. That is that particular man's policy. He is the managing director of those mills. It makes no difference whether he thinks he is right or wrong. He must admit if he is justified in keeping a man's wages as low as possible that the man is also justified in keeping them as high as possible and if he is wrong then he cannot object to the man trying to correct it. But he is not willing to admit he is right or wrong. That is just his policy. This is a grievance of the men who work for him. This is one reason he has trouble keeping men.

To get back to our discussion of the labor problem a large part of the troubles are directly traceable to the un-

willingness of either side to acknowledge their dependence upon the other. Instead of trying to reach an agreement through understanding each tries to force the other to his opinion. This brings on industrial strife. Neither party has ever tried to cultivate character in its organization that would tend to impress the other. But they are both pretty keen on impressing each other with their power. This has not proven successful for either side.

As the first move in any change should come from the employer it follows that he should consider the influences and instincts that govern men in their human relations, especially in the mill. He should consider what employees are entitled to and also what they want and judge not by what he wants but by what is right. Questions of this character cannot be settled by the ideas and opinions of the employer alone.

And it is here that our "feelings" enter into our decisions. These feelings may be classed in three divisions.

(1) *Self Preservation.* Self preservation is the first law of nature. All men have this feeling and it is the strongest force within a man. Therefore a man cannot be blamed for practicing it. You must not expect a man who thinks of dollars and cents in terms of bread and butter to be very keen on anything but a high daily and hourly rate In other words, you cannot expect a man to deliver the goods on his job unless his wages permit him to keep in condition so that he can deliver.

(2) *Human Relations.* The second class of "feelings" which men have is that class which more or less governs our relations with our fellow beings. In the final analysis it is these human relations which make life worth living. Included in this class are such things as home, love, honor, wife, family, mother, friends and all the relations that we humans have with each other. Did you ever stop to think what would happen if it were possible to remove from our relations with each other, those things to which I have just called attention? Would you care to live in a community where these relations were unknown? We probably have, all of us, some one friend who is closer to us than all others. And the reason is that at some point in our lives, while we were going through some crisis, that friend stayed by us and saw us through and probably gave the helping hand that put us back on the road. Suppose there was no man to give us the helping hand.

And so the employer must take into consideration the relations between his company and the employees and make those relations human.

Before I leave this second class, I must mention the feeling of fear. It is this feeling that causes much unnecessary trouble between employer and employee. The things which we humans fear are usually those things of which we are ignorant and cannot explain nor have explained to us. There has been and is today a lack of trust between employer and employee. Each is fearful of any move the other makes. Efficient industrial management cannot be carried on where this feeling of fear is present. The antidote is simply a complete understanding, arrived at through proper ways and means, that will not give either party an opportunity to distrust nor remain ignorant of the other's attitude. The question comes up as to how are the parties to know that they can trust each other. The answer is that they must show by their actions and dealings that they can be trusted. This is the plain duty of each party.

(3) *Self Respect.* The third "feeling" and perhaps the most "touchy" of all, we call self respect. It is shown in a man's wish to *count* for something among his fellow men. He shows it in his ambitions to rise to a better job that he may amount to something a little higher than he was before. It takes him into his clubs and societies. It makes him curb many of his desires and do many things he doesn't want to do. But he does them because he doesn't want to lose his self respect. Nature placed these feelings in every human being. Perhaps they have become dulled by other desires. You may find men who have lost their self respect but I have seen them come back under right conditions and become all that could be desired as men. And men who drop to the lower levels of life, even, have a certain amount of self respect and if their feeling of self respect is hurt they are very quick to resent it.

It is self respect that makes a man take pride in his work and makes him put forth his best efforts, that he may produce something high in quality.

It is self respect that makes a man desire to bring up his children in a comfortable home amid pleasant surroundings and to educate them and start them off in life with good prospects.

And it is self respect that makes a man unwilling to accept charity but makes him desire that all those things shall come to him through his own efforts, honestly rewarded. His motto is live and let live but first he must be allowed to live.

And so self respect is a strong influence, which, when allowed to grow up and become healthy, has a mighty effect upon the dealings of men. And here is the big thing of all. The same self respect that makes a man desire all these good things for himself, makes him unwilling to accept them unless they come to his employer as well.

Therefore the company which passes out only *charity* every week in the form of the pay envelope is doing mighty little in the way of building up a feeling of "self respect" among its employees.

These, then, are the three great influences that enter into all pleasant relations between employer and employee. There are others, but these three are the ones which in my experience are vital.

We have spoken of good management. What is it? How can you tell when you have good management? What is the thing in management to strive for?

Good management is the production of service of the highest quality and greatest quantity which can be produced and sold at a profit sufficient to give "management" and "help" a fair return on their capital and labor, and which reaches the consumer as promised. Good management does not end with the production of service, but should be carried through until the service reaches the consumer in a satisfactory condition and the consumer has paid his bill.

Again I have spoken of quality and quantity of service. My experience has taught me that good management results more from quality than quantity. In other words quality should be the thing to strive for. Quantity will follow it.

The production of this form of service can only be accomplished provided the management conforms to certain stated principles. They are as follows: justice, cooperation, economy and energy.

By justice I mean the square deal. This applies to "management," "help" and ultimate consumer.

By cooperation I mean that "get together" spirit which is so absolutely essential to the successful completion of any project. This means the absolute realization of the codependency between "management" and "help."

By economy I mean the putting to a good use of all time and effort with the realization that it is mutually beneficial. True economy is the conservation of all human resources.

By energy I mean the concentration of these human resources in one force or power which pushes ahead to completion the production of the particular service.

These are my management policies and my actions are entirely governed by these four principles. If the employees want a voice in the management then I firmly believe I am justified in first insisting that these four principles shall be accepted by them as their policy toward the management and the principles which shall guide their actions. (There will be more to say about this later.)

Let us now consider just what the employee wants. From the recent labor agitations and the general attitude of the employee it would appear as if there is only one thing they wanted and that is higher wages. We might also very truthfully answer this question by saying that they want all they can get. A short time ago there was a disturber in our organization. I called him to one side and engaged him in conversation to try to find out what that man wanted but he could not tell me. He admitted that he was getting all that he was actually worth and that his treatment in other ways was all that he could ask for and finally ended by saying that he guessed he had been wrong in the stand he had taken. Four hours later that man delivered a fiery, red-hot speech at a labor meeting which demanded a twenty-five per cent increase in wages with twelve conditions attached. I sized up this man as one with a gift of speech who realized his powers of persuasion and his ability to sway men one way or the other and liked to use it. He liked to feel his powers. He had no sense of right or wrong, loyalty or justice and so was a misfit in our organization.

A short time ago a labor leader was asked to state, in a private conversation, just what the unions he represented wanted. His reply was that the unions wanted an eight hour day and then an increase in wages, and after they got that, then they wanted another increase in wages, and if they got that they would keep going after increase after increase and before they got through they would make the employers sweat money. He was asked if money was all they wanted? He was asked if there wasn't something else besides money the men wanted? He replied that there was nothing else for them to want but money. Give them the high weekly wages and they would be satisfied. This is the talk that makes the employer get his "back up" and brings on an industrial strife.

I am going to try to state what, to my mind, are the conditions that the employees want. It may sound rather peculiar to say that I have never been told by but one man that the employees want some of these conditions, but they are the things that labor desires as I see it, and yet I am forced to admit that some of the things, as far as I know, labor doesn't realize it desires. Higher wages and shorter hours have been put before the employees so often and so persistently that they form a sort of a fence over which the employee cannot see, but he realizes that there is something on the other side of the fence but his attention has been held to one side to the extent of not giving him a chance to look over on the other side. Many employees are ready to admit, and are doing a lot of thinking over this fact, that with their high wages and short hours they are not so well off as they were under their longer hours and lower wages. A lot of them are asking why.

First and foremost among the things desired is a living wage. This is the beginning and the one thing in which every man is vitally interested. It is the foundation of self preservation. But here is the point. It is not all. It is not everything. There are many things money cannot buy and many things that money cannot give. But this is the first consideration and rightly should be so.

Second on the list I would place the desire for an organization of employees. Members of unions and nearly all non-union employees believe in an employees' organization. Many union and nearly all non-union "help" are not satisfied with the present form of organization known as the "unions" for representing workers in the textile plants. But the principle of organization, properly carried out and under proper guidance, is something that nearly all employees desire.

Third in line I would place the desire for continued employment. Employees are beginning to realize that the important thing for them is not high wages during times of great prosperity, but they should receive continuous employment at fair wages at all times.

Fourth, I would place that desire that the employee, in some way and by some means, have a voice or share in determining those policies of management which vitally affect him. Among such policies are hours of labor, wages, efficiency or scientific management, discrimination between men, unjust discharge, accident prevention, sanitary conditions, etc.

Fifth in the order I would place that desire that the employee should, in some way, share in the profits that come through his labor.

These five points give an outline of the principal things which labor actually wants, as I see them. I believe that organized labor has lately demanded that they alone be allowed to designate the number of hours that shall constitute a day's work. The great trouble with this open dissussion is that the radical speaks for labor and the conservative for the employer. It is the average of each who should get together.

And now let us consider what the employer wants of the employee.

First and foremost he wants a square deal and an honest day's work from the employee to the end that the production and sale of the particular service which they produce may proceed in a manner that will prove profitable and beneficial to all concerned.

Second he asks that the employee look at the situation once in a while from the employer's point of view. He asks the employee to realize that the employer is entitled to a fair return on his investment. He asks the employee to realize that the risk is all the employer's. That he is the one who takes that risk and not the employee and that if he loses money one year, that he is entitled to his return for that year at some future time, from some good year. He asks the employee to realize that there are two factors, namely, quality production and cost, which make or break the service which they are producing. High quality production at a low cost is bound to make a profitable combination that must prove mutually beneficial. He asks the employee to realize that waste costs money, and when, through carelessness or lack of attention, a machine breaks down, that it costs money to repair it, and there is also a distinct loss in money due to the loss of production while the machine is being repaired.

Third, the employer wants some arrangement that will enable him to treat with his own employees as distinct from men not his employees.

Fourth, the employer wants the employee to realize the responsibility that goes with his job, to cheerfully assume that responsibility and faithfully carry it.

The problem of organization in the working force is therefore the bringing together of these two classes of desires which are so similar as to principle, but so far apart in practice. It means the elimination of the old understanding of the two classes, capital and labor, and the formation of a single unit in which everyone shall be a fellow worker and all striving for the production of a high quality service that will reach the ultimate consumer at a price that shall be just to all concerned.

This is not *socialism* nor any of the other "isms" that are so common nowadays. It does not mean the elimination of the employer as an employer of labor. He will still be all of that. We will still have companies and corporations. They will be just as necessary to labor as labor will be to them. One cannot live without the other. But it does mean the breaking down of that fence that has always separated the employer and employee and the building up of an organization in which the members all realize they are working *with* each other and not one side working *for* the other. And the creed of this organization shall be the production of high quality service performed on the basis of justice for all, cooperation, economy and energy.

Such an organization should eliminate most of the differences that exist between the employer and employee because those differences would be open for discussion and would be settled with justice for all. Such an organization will not prevent differences from arising, but will furnish a method of settling differences equitably.

The next question is what shall be the source and what form shall this organization take?

The source must be the employer. The employee cannot do anything. It must come from the employer. It is his problem. He must decide how he shall meet it and how far he is willing to go. In other words he must decide what his policy shall be when dealing with his employees. There are hundreds of employers who have said that they have always believed in giving the employee a square deal, that they believed in thorough cooperation, in economy of operation, and with everybody pushing the thing through to completion. They have said that if the employees would only get some of the employer's viewpoint, that they might be more reasonable in their attitude. They have always tried to foster pleasant relations with their "help." Why, don't you know some that are able to call every man by his first name as they pass through the plant? Perhaps they have a surplus of wood lying around in the yard, so they give it away to their "help." Who gets it? Usually some office man, overseer, boss or minor executive. Perhaps they run a garden and orchard with a surplus at times. Who gets it? The same ones that get the wood. And some employers believe that their employees are entitled to share somewhat in the prosperity of the concern and so allow their employees to purchase stock in the company. One man that made this statement admitted that there was no employee of his that owned any stock in his company below the rank of overseer and that they had never been given the opportunity to purchase any. (I speak of this as an incident and not as a statement of policy.)

Employers have seen and felt the effects of the policies of the labor unions. They feel that if their present attitude continues, it can lead to but one thing, industrial death. This being so, it is only common sense that the employer should do all possible to avert such a catastrophe. Most employers have not done much but fight back at labor and bring on strikes, which only breed ill feeling on both sides.

The next question is what can the employers do? Some employers, having realized conditions as they are, and being progressive, have tried out many different schemes. Practically all have noted much improvement and mutual benefit. They have all arrived at some form of what is now being called "industrial democracy." This is not advanced as a cure-all. There are over two hundred concerns in the United States working under some form of industrial democracy, and some of them for over five or six years.

What is this industrial democracy?

It is that condition in industry where the employer and the employee each realizes and admits to the other his dependence upon and his responsibilities to the other. It must provide some means whereby each shall be represented and have a voice in shaping and putting into effect the policies under which the industry shall be carried on as it affects the parties in interest. There must be no "camouflage."

Its object must be the production of service. It must be founded on the Golden Rule and dispense justice to all. Cooperation must be the watchword but it must not come about through one side saying to the other: "Now here is the scheme—you cooperate." That is dictation, not cooperation. Economy in manufacture should always be the aim but it should not be brought about through a reduction in wages until all other sources of expenditure have been thoroughly investigated. Energy should always be exerted toward the completion of the service but must not come from driving methods but from the employee's own realization of his responsibilities and obligations.

In political democracy we have the different forms such as the town meeting, the city caucus and election, the city government, the state government and the national government, but they are all representative of political democracy. And so in industrial democracy we have many forms of application, some very simple and others as elaborate as our own national government. In fact, there are many concerns who have patterned after our form of national government. They have their house of representatives, elected by the workers, each representative for each unit of around twenty to twenty-five workers. Then the senate is composed of senior workmen or foremen. Then the cabinet, composed of officers of the company and finally the president, as represented by the board of directors.

The original action on any measure must come from the "House." The "Senate" and "Cabinet" may recommend to the "House" but they cannot pass any measures until they have first been approved by the "House." Measures passed by the "House" next go to the "Senate" and then to the "Cabinet" for approval. After being approved they become a part of the policy of the company.

My personal opinion is that some form of industrial democracy must and will be the way in which money and labor shall be brought together and harnessed up to produce some form of service which shall be useful and prove profitable to all concerned.

But I also believe that, as under certain conditions some people should not be suddenly given political franchise,

having had no previous knowledge nor experience under such conditions, so in industry, workingmen should not be suddenly given industrial franchise. The history of the world for the last four years is full of instances where such sudden changes in political matters have been disastrous.

In industry the start should be small with committees appointed or elected who will pass upon such matters as placing the responsibility for imperfection in the work, the amount of waste and second quality goods made, the way and manner in which vacations shall be taken and other small matters along the same line. And then, as they show an ability to successfully handle such problems, their duties are increased until they are finally ready for complete industrial enfranchisement.

Some employers are bound to feel that such a policy will arm the employees with a club which they might use with disastrous effect, but arming a friendly group of employees is an entirely different thing from arming a group which is antagonistic.

Again, some employers may say that the employees have nothing to risk. It is the stockholders' factory and money and these stockholders have a right to do with it as they see fit. No one will dispute that point. They certainly have that right, if that is the way they look at it. But it is just that attitude that breeds trouble and is the cause of some of our present day labor difficulties.

The point is right here. Employer and employee have got to get together closer than they ever have before. Some solution must be found for our labor troubles and I believe the points herein brought out will form a basis for that solution.

National and state laws regulating labor may be passed and may be the solution under certain circumstances, but I believe in our cotton mills that a more just and equitable solution may be found by the two parties in interest among themselves, without the necessity of bringing the law into the discussion in any way.

## Textile Troubles.

Careful, accurate workmanship is probably more essential in textile production than in many other lines of manufacture. A slight error in color matching, a little slip in process or a mechanical fault that goes unnoticed for even a few minutes, and the damage is done! The result—goods that cannot pass inspection—products that must be sold as "seconds" or even thrown away.

Better light is the answer to many of these difficulties. A bright workroom means greater accuracy, fewer errors and accidents and happier workers. Waste and spoilage are reduced to a minimum, and production is speeded up to a surprising degree. That has been the experience of many textile mills that have adopted, successfully and profitably, the policy of increasing light by decreasing lighting expense.

Better light is generally obtainable in a simple, inexpensive way. Painting the interior of the mill with a gloss white paint of higher luster, the ingredients of which are chosen with particular attention to their light-reflecting qualities, produces a maximum of light diffusion. It is effective in producing the desired result when applied on wood, iron, plaster, concrete, cement, or brick.

## A New Edition of the Blue Book.

The publishers of Davison's Textile Blue Book announce the completion of the thirty-second annual edition, which shows every mill report carefully revised. Six hundred new manufacturers have been added, while all mills out of business have been taken out. Thousands of changes in mill names, officers, goods made, equipment, selling agents, etc., have been made, and the various dealers and other allied lines have been brought up-to-date. The new feature this year, and of great interest now the war is over, is a directory of cotton merchants in all foreign countries.

Besides the regular reports, a separate list of new mills is shown, and this is useful in reaching new concerns. A list showing all mills with dye houses is a valuable feature for chemical and dyestuffs firms. A classified directory of dyers and finishers has been added. The textile maps, showing all towns where there are textile plants or dye works, have been carefully revised.

The Textile Blue Book is really twenty-one directories in one volume as follows: directory of cotton mills; woolen mills, worsted mills; silk mills; knitting mills; jute, linen and flax mills; Canadian mills; dyers and finishers; mills with dye houses; commission merchants; cotton dealers; linter dealers; waste dealers and manufacturers; mattress makers; wholesale rag and remnant dealers; textile supplies; new textile mills; classified directory of mills.

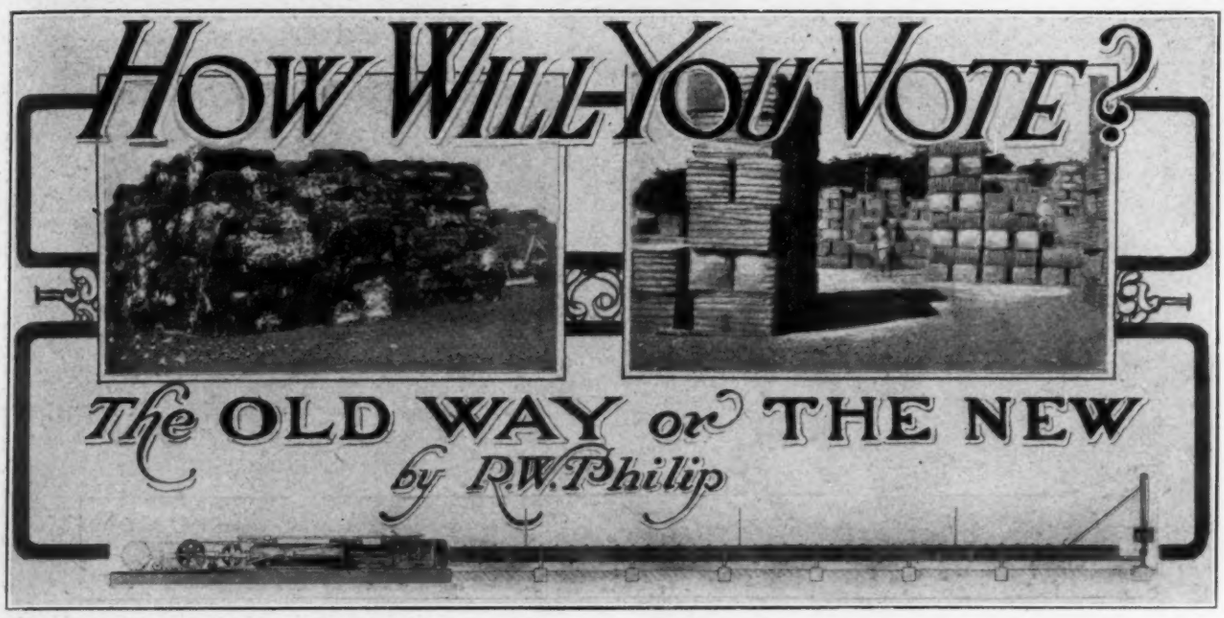
Two editions are issued as formerly; the office size, 1645 pages, with heavy cloth binding. is printed on fine plate paper with a large page and contains all the above features, while the handy edition of 1500 pages has all features given in the office size, except the classified directory of mills and textile supply directory.

The salesmen's directory, bound in flexible leather, is much smaller than the handy edition, but has a full report of every mill, dyer, etc., these being arranged alphabetically, all mills under each town, different from the Blue Book, which subdivides into cotton, woolen, silk, etc.

The volumes can be obtained through COTTON, or direct from the publishers, Davison Publishing Co., 50 Union Square, New York. Prices delivered, office edition, $6.00, handy edition, $4.00; salesmen's directory, $3.00.

The Corrugated Bar Company, Inc., of New York, announces that it has taken over the entire assets and liabilities of the Corrugated Bar Company, a Missouri corporation, and is continuing the business of the latter company, which is in process of dissolution. This means the retirement by purchase of the Garrison interests, which held the majority of the stock of the Missouri corporation from its inception, in 1891, until the recent organization. The control now passes to A. L. Johnson, who has been connected with the company since July, 1895.

The Morse Chain Company, Ithaca, N. Y., have recently issued a catalog called "A Chain of Evidence." This catalog is known as publication No. 14, and contains 20 pages. The catalog illustrates a number of large power chain drives which have been installed by this company. Full data on the construction of the chains is contained in the catalog. Detailed explanation is also given of the Morse "rocker joint," designed so that the pressure due to tension of driving will be taken on a broad flat surface when between the sprockets of a wheel.




Did you ever try to read a newspaper when the type was all blurred and the reading matter full of mistakes? And did you wonder what caused this condition? Nine times out of ten the fault is improper facilities at the point of origin—the print shop. We have a similar situation in the cotton industry today. The congestion on the railroads, the losses from country damage, the dilapidated condition in which the bale generally reaches the consumer, the excess tare, and a large part of the other obstacles which clog the progress of the cotton bale are caused by a lack of proper facilities and an adherence to old time methods. All along the course of its journey from the gin to the factory the cotton bale is handled and treated like a friendless orphan so that when it does arrive at its destination, its condition is often such as would warrant rejection on the part of the consumer. But those who do the handling and shipping en route are not entirely or chiefly to blame. The chief fault is at the start of the bale's journey. The old flat bale, sampled and patched until it becomes a veritable tramp among the country's products is the offspring of a system so inadequate that a neat, compact, clean, full-weight bale can hardly be expected by the purchaser. The remedy for this condition is the establishment of the high density compress at the point of origin—the gin.

No commodity that enters into the domestic or foreign trade of any country is so carelessly and inadequately prepared as American cotton. How these conditions which now exist in the preparation and transportation of cotton may be removed, and practical and economic business methods applied is a question that commands the attention of every person at present concerned in the several branches of the industry.

High density compression at the gin would greatly reduce the space required in warehousing and transporting the cotton bale. The space now occupied by the large plantation bale in the railroad cars and warehouses, before going to the compress, and the more or less extra space taken up by the recompressed bale while being hauled from the compress to its destination, could be utilized and used for the shipping of other bales or other materials. The average 36-foot freight car will hold approximately 75 bales of recompressed cotton, prepared at the present density standard of 22½ pounds per cubic foot. Into the same space could be loaded 100 bales or even 125 bales of gin compressed cotton. As the average buying unit of cotton is 100 bales, the change would be of advantage to the buyer in that he would receive his orders in units, instead of getting about 75 per cent of a unit in one car, while the remainder, loaded in another car, mixed with other materials billed for junction points, would get lost enroute, or would be sidetracked to await the unloading of the remainder of the contents of the car in which it was loaded, and the refilling of this space with some other commodity.

In March, 1918, Dr. A. A. Hamerschlag undertook for General Goethals a study of better methods of packing army supplies with a view of conserving shipping space and relieving railroad congestion. He devoted much time to cotton and in his report to General Goethals, he pointed out that, in his opinion, the establishment of the high density compress at the gin would aid in relieving the congested railroad conditions. Under the head of "Location of Presses," Dr. Hamerschlag said:

"Gin compresses to produce the high density bale would easily be the best means of securing the maximum saving in labor, handling and freight space, and the manufacturers of the machines would find their opportunities enhanced by the demand for smaller bales in better condition for transportation."

In his report, which was published practically in full in the August, 1918, issue of COTTON, Dr. Hamerschlag also stated that he was of the opinion that gin compression would bring about a reduction in the cost of transportation both on land and sea, would secure for the owner cheaper inland and marine insurance, and would make the cost of warehousing far less. The cost of condensing the size of the bale would be reimbursed by preferential rates on the railway and steamship lines for a more effective use of freight and cargo space.

Another advantage of gin compression to both producer and ultimate consumer is the fact that the tare would be reduced and the grading of the cotton could be done at the gin. Increasing the density of the bale would reduce the

size of it, thus reducing the amount of metal ties and wrapping necessary in preparing it for shipment. The bale, once compressed and wrapped at the gin, would abolish the need of taking off the wrapping at the compress and the substituting of jute patches as is done under the present system, thus making the saving of wrapping material and metal ties twofold. There would be only one tying of metal bands instead of two. When the cotton is baled and compressed at the gin it is then ready for shipment to the purchaser, with no lay-overs.

There would be no necessity for tearing the covering open for the grading to be done as is now the custom even after the cotton has been recompressed. The suggestion has been made and has received approval from many quarters that the government establish a uniform system of grading at the gins where the gin compress is established. While the Department of Commerce is opposed to any plan whereby the government would have extended supervision over the cotton industry, the results which would follow the establishment of a system of grading at the gin or at locally suited compress points should be considered.

If the United States government, through commercial interests which would command universal acceptance on the part of those concerned in the handling and marketing of cotton, should decide to appoint experts to grade cotton, the men selected for these positions would be men of high character, having large experience in this field and whose judgment would be generally accepted without hesitation. The official grading could be done immediately after compression and before the bale is wrapped, and an official certificate be given to the owner. This certificate would show all the requisite specifications. It could then be used by the owner as collateral on a loan in case it was desirable to hold the cotton.

The inauguration of government grading at the local compress points would tend to improve the quality, increase the value and guard the integrity of the cotton crop by eliminating the nondescript grades, few of which are fit for spinning. Knowing that he could get a better price for good quality and that his cotton would be accurately graded, the farmer would be induced to grow the higher types and would exercise greater care in picking and proper vigilance in protecting the cotton both before and after ginning. Cultivation by communities of types best adapted to their several localities, compression at centrally located points, and grading and certifying by competent authorities, go to the root of the existing evils.

The character of wrapping the bale would be greatly improved by the proposed high density compresses. The wrapping covers and completely protects the cotton, which the present covering of the recompressed bale does not, and it also permits the package to be plainly marked in a manner that cannot be obliterated.

The marking of the bale so that it may be easily identified is another matter of high import. The bill of lading and other shipping documents describe the marks placed on the bales for identification and if these be defaced or removed by cutting the covering in sampling, delivery of the goods to the purchaser is difficult, especially when a large cargo assigned to numerous buyers is concerned.

The condition of the bagging of a cotton bale when it leaves the present large compress precludes proper marking. Moreover, the operation is so rapid and the material employed so inadequate that the mark is often so smeared that it is almost useless for the purpose of identification.

Several metallic devices have been introduced for the better marking of cotton. These, placed on the bale when it is covered and compressed at the local compress point for shipment direct to its destination, are securely fastened on the tie and cannot be removed without removing the band on which the tag is fastened. The number and location of the plant at which the cotton was baled could be stamped on the tag and thus furnish means for determining by whom the cotton was packed. The tags could be numbered serially so the record would show the producer of any cotton that might need to be identified.

A smaller and uniform bale would add greatly to the present warehousing facilities of the cotton growing states, as the bales would be of the same size, and warehouses could be measured and also built in uniform size in multiples of the bale dimensions. This would not be difficult. Thus space in the warehouse which is now occupied by the overlapping, bulky and bulging bales of the present time could be fully utilized.

The enormous saving of the waste now made which would result from the universal adoption of suitable local high density compress centers would alone repay the cost of installing them. Thousands and thousands of pounds of cotton are wasted through the present process, from the start all through the system until the dilapidated bale finally reaches the mill.

The cotton itself would not be injured by the high density compression process. The staple would be unharmed. The product would be pressed only one way, while in the recompress system, there is a chance that compression will be made in two directions—one way at the gin and another at the recompress plant.

The construction of modern fireproof warehouses for storing baled cotton, located at or near the local compress points would logically follow the inauguration of a suitable system of compression. Adequate warehouses would not only safeguard the product but would be a decided convenience in its transportation and would contribute materially to reduce the present charges for insurance and handling. The former would be reduced as the risk would be much less, and the latter because the bales would be much easier handled.

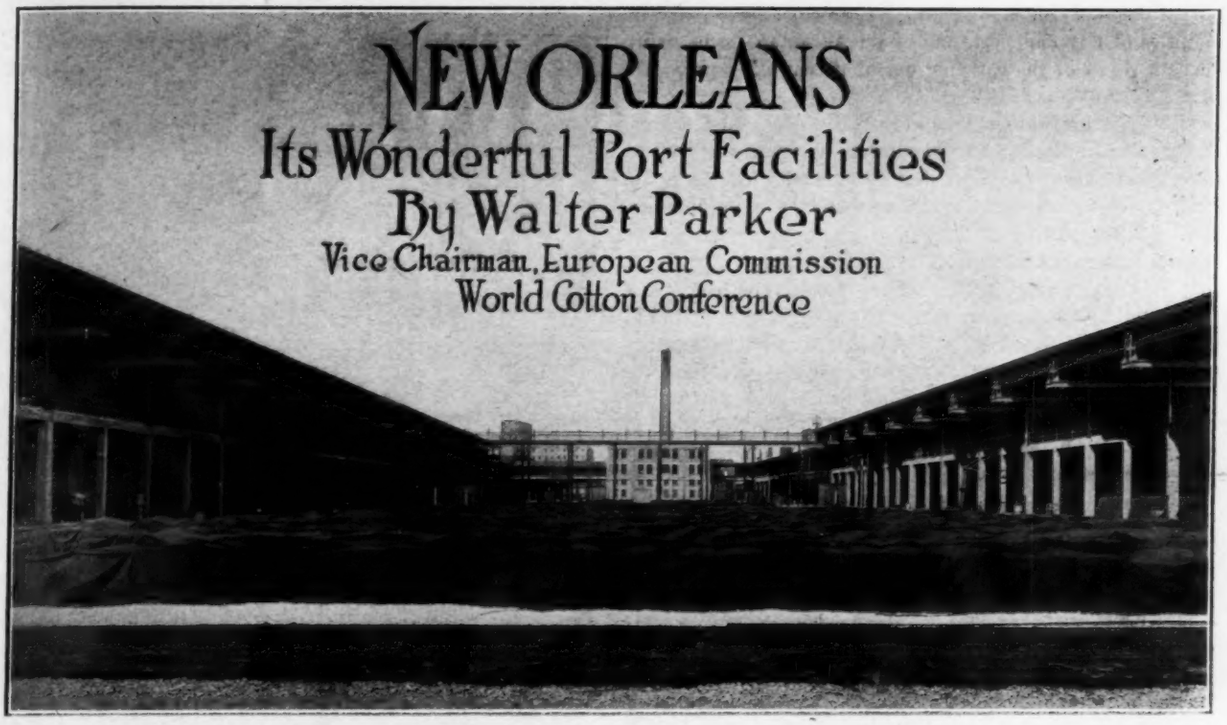
Such a plan has received the approval of many influential and farsighted men in this country and abroad.

If the plan of Government grading and sampling, as outlined, should prove either cumbersome or obnoxious, it should be remembered that high density machinery may be procured, from the products of which a hand operated sampling machine will take a perfect merchant sample from any bale. The sample may be of any desired weight and can be drawn from the entire cross section of the bale. Furthermore it is unnecessary to repress the bales, so sampled, when again wrapping them for shipment. This recovering may be done without detriment to the wrapping or the metal ties.

The establishment of the high density compress at the point of origin—the gin, and the grouping of the gins at selected points in the cotton growing states of this country will be the means whereby America will at last equal India, Egypt and China, where this method is already adopted, in a suitable and economical handling of this valuable and necessary product. Cotton manufacturers individually, and collectively through their various associations, should at once express their interest in this movement.

# NEW ORLEANS
## Its Wonderful Port Facilities

By Walter Parker
Vice Chairman, European Commission
World Cotton Conference



Yard of the Public Cotton Warehouse Showing Cotton Stored under Tarpaulin.

Munitions of war, clothing, automobile tires, covers and tops, and unnumbered other essentials to man's comfort and well-being require cotton.

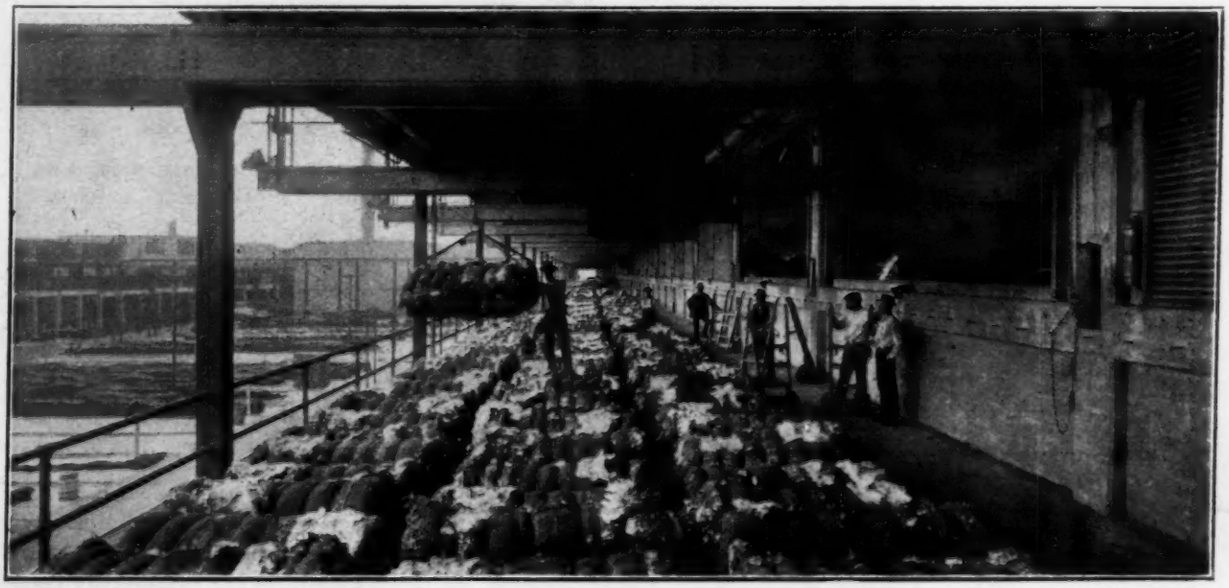
Three fourths of the world's supply of commercial cotton is produced in the southern states.

To produce, gin, bale, market, finance and distribute the annual crop requires millions of field workers, hundreds of thousands of ginners, handlers, weighers, samplers, supply and transportation people, tens of thousands of merchants and clerks, and thousands of future brokers, spot dealers and exporters.

Drawing subsistence, trade, occupation and profit from the South's annual yield of cotton there are other millions, of men, women and children engaged in many pursuits.

On the average, some six or more million bales of cotton are annually produced in Louisiana, East Texas, Arkansas, Oklahoma, Missouri, Tennessee, Mississippi and Western or Southern Alabama.

New Orleans, the city selected for the holding of the World's Cotton Conference on October 13, 14, 15 and 16, developed an ambition some twenty years ago to become the most efficient cotton market that the enterprise and means of its citizens could make it—the line of low resistance for a region producing more than 6,000,000 bales annually and went about the task deliberately and in full knowledge of the needs of the cotton industry, of the pos-



Sampling Cotton on the Upper Gallery. A Crane in the Foreground. Note Fireproof Shutters at Right.

sibilities of city and port, and of the advantage to be gained as a result of the carrying out of its carefully prepared plan.

Investigators were put to work. They gathered the data and reported. Economists searched these reports and made known the economies required and the results to be sought.

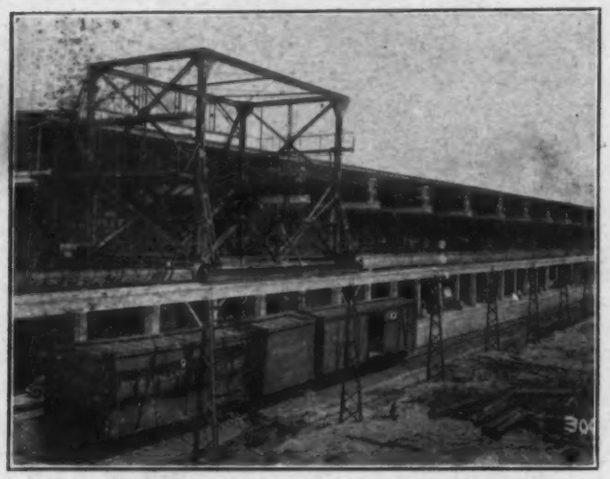
Engineers then were brought in and as a preliminary step studied existing methods and practices in the cotton industry from the plowing of the fields, through the planting, picking, ginning, baling, sale, transportation, compressing, handling in the port markets, exporting or shipping, receipt at mills, handling and use there, and the financing of the entire proceeding. Then they gave serious thought to physical conditions at New Orleans, to its scheme of public ownership, equipment and operation of the harbor front, to the function of and service rendered by the New Orleans Cotton Exchange, to the scheme of things as it applied to

Cotton Ready for Shipment. The Crane Transfer and its Operation can be Plainly Seen in this View.

merchant, broker, clerk and yard workman, to drayman and warehouseman.

Then they evolved a plan.

Meanwhile, the New Orleans Cotton Exchange members devoted years of study, thought and action looking to the perfection of their system of future and spot trading and to the improvement of the service the exchange renders the selling and buying trade, the buyer and seller of hedges, the exporter, and the industries requiring cotton.



The Crane Transfer for Moving Cranes from one Compartment to Another at the Public Warehouse.

Handling Baled Cotton in the Concrete "Safes."

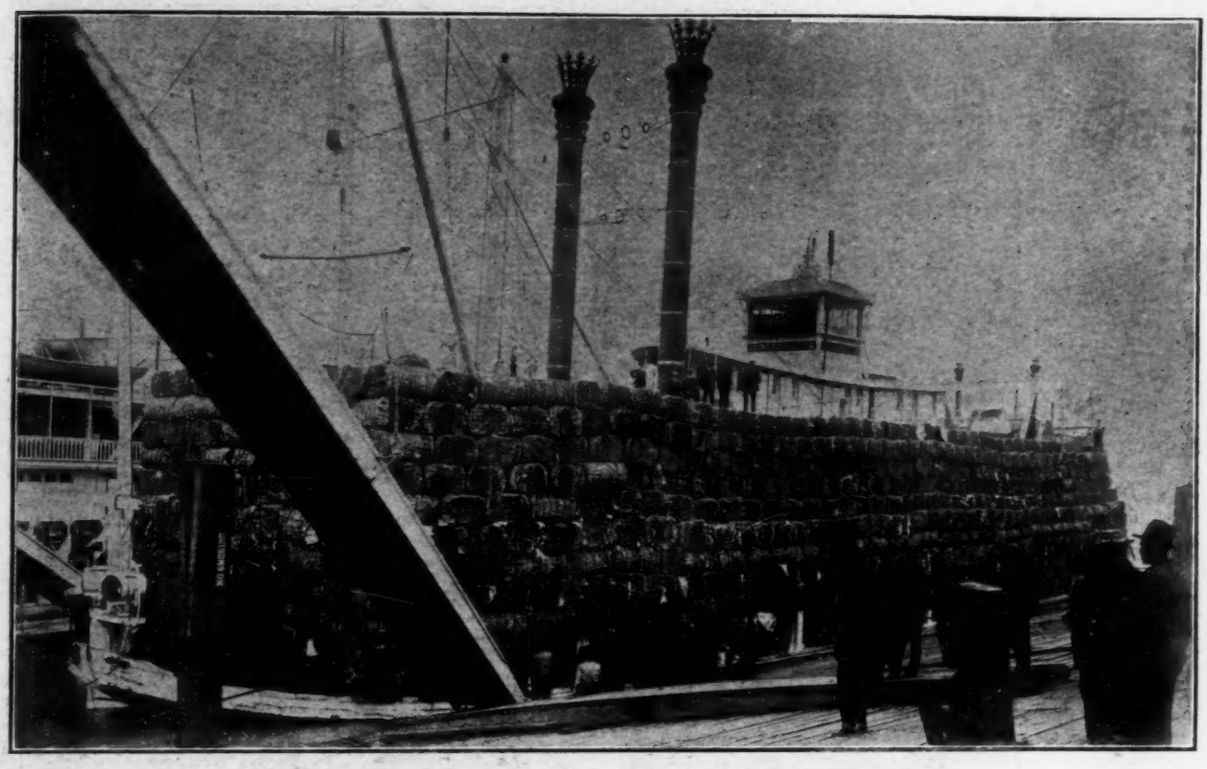
## What New Orleans Has Done.

It has constructed a publicly owned and operated warehouse and coordinated terminal for the storage and handling of cotton.

The value of this plant, 100 acres of strategically located harbor front land included, is approximately $13,000,000. Had private enterprise built it, the investment would have been about that sum of money. The interest on $13,000,000 at 6 per cent is $780,000 annually. Sinking fund and taxes would add $500,000 more or a total fixed charge, exclusive of upkeep and operation, of nearly $1,300,000 annually. But New Orleans did not act along lines of private enterprise.

The land worth at least $10,000,000, belonged to the public. The cost of the plant was $3,500,000. There are no taxes, and the interest rate on the securities sold was 5 per cent. So the overhead stands approximately thus—interest and sinking fund, on $3,500,000, $210,000 annually.

The plant has a storage capacity of 400,000 bales. On



The "America" with a Load of Cotton from "up de River."

a year's storage basis New Orleans' publicly owned plant must collect 10½ cents a bale for the fixed overhead as above, while a privately owned plant of the character described would have to collect 65 cents per bale for the overhead as above.

But this saving is only a very small part of the advantage gained and to be gained.

Scientific coordination of river, rail, ocean and storage reduces costs of handling to a minimum and increases the dispatch of unloading and loading to a maximum.

Solid concrete construction and the system of automatically closed and sprinklered fire proof "safes" reduce the fire hazard to a very small equation.

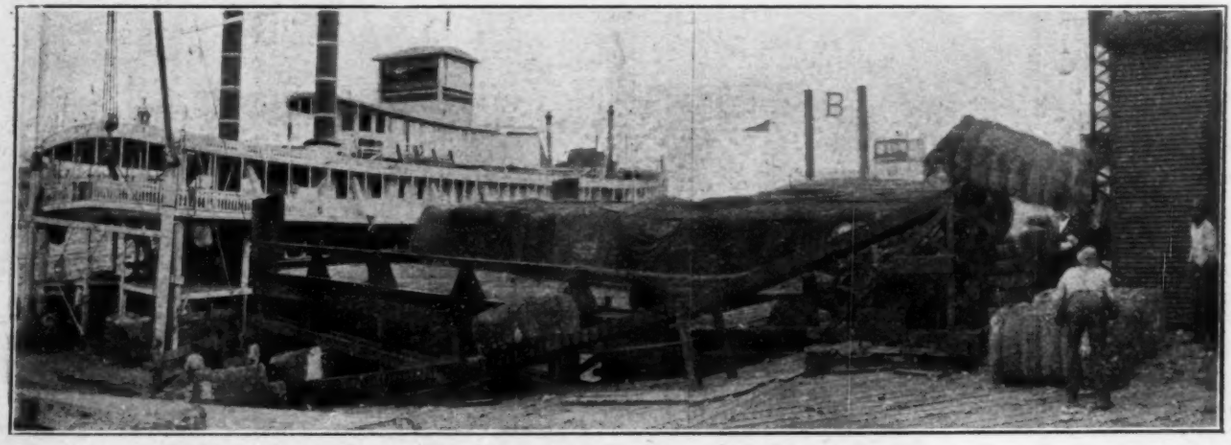
Inspection and certification showing grade, character, staple, class and weight by a highly competent, authoritative and responsible inspection bureau, operated by the Cotton Exchange, is a factor of great importance since it enables owners of cotton to obtain very low cost money for the financing of cotton.

A simple bale pulling device enables the warehouse to enjoy both the efficiency of single bale storage and the economy of piled storage.

Finally, these facilities are so strategically located at a primary exporting and supply market as to bring within the reach of cotton owners, merchants, handlers and exporters all the advantages of a completely equipped market of deposit, surplus supply market and market of resale.

The New Orleans Cotton Exchange, which has always operated on actual spot market differences, supplies a medium for hedges fully conforming to the spirit as well as the letter of the federal regulations which were devised to give neither buyer nor seller a technical market advantage.

The use of the Mississippi River and its tributaries, and other cotton belt streams which empty in the gulf, as low



Using an Endless Belt Conveyor to Unload the "America."

A View of the Public Cotton Warehouse Showing the Co-ordination of Rail and Ocean Transportation.

On the Ground Floor at one of the Sheds.

Views of the Army Supply Base in Course of Const uction. It is now Completed and Cost $15,000,000. This Base Supplies the Philippines and Other Possessions.

Courtesy Associated Advertising.

THE LARGEST COTTON WAREHOUSE IN THE WORLD.

cost channels for the transportation of cotton, has been made economic by the creation of these harbor front cotton handling facilities at the port of New Orleans. In recent years the use of the waterways for this purpose has largely been curtailed because, with no harbor front cotton housing facilities at New Orleans, the movement of cotton by dray from boat side to distantly located warehouses at the port gave railroads with warehouse track connections an advantage.

With these facilities which are being enlarged and extended—additional storage capacity for 85,000 bales being added this year, bringing the annual handling capacity well above 2,000,000 bales—New Orleans expects ultimately to increase its annual cotton business to 5,000,000 or 6,000,000 bales, to double or treble its contract business, and to greatly increase its world prestige as a cotton market.

So sure is New Orleans of the effectiveness of the economy it has developed as a strategically located magnet for the drawing of cotton that its plans and purposes are open to all other cotton belt markets and ports, and well informed guides are provided by the Board of Commissioners of the port and by the New Orleans Association of Commerce for all visitors who desire to visit the publicly owned cotton terminal.

## Other Works of an Economic Character.

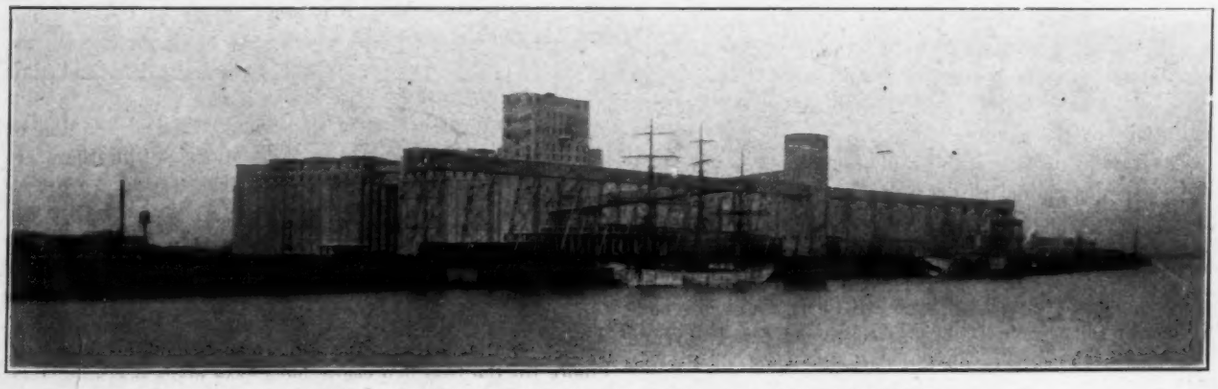
New Orleans owns and operates a municipal belt railroad, a publicly owned grain elevator and seven miles of publicly owned steel receiving and discharging harbor front docks.

A navigation and industrial canal, capable of taking ships 700 feet in length and 74 feet in width, all publicly owned and operated, and tax free, is being opened through the city from the Mississippi River to an arm of the gulf.

This canal will supply deep water frontage for industries and private warehouses and ultimately will be extended to deep water in the gulf, thus reducing the distance between New Orleans and Europe by 100 miles in addition to creating a slack water channel. This facility will cost about $12,000,000.

The Federal Government, at a cost of $13,000,000 has just completed a general commodity warehouse and terminal on the New Orleans harbor front, with a storage capacity of 157,000 tons of miscellaneous merchandise. Its floor space exceeds 2,000,000 square feet. It is artificially cooled or heated to maintain even temperature. One month after completion on June 15 there were approximately 150,000 tons of merchandise on storage in this plant.

New Orleans has rat proofed 150,000 buildings at a cost of about $9,000,000.



PUBLIC GRAIN ELEVATOR—OPERATED BY THE BOARD OF PORT COMMISSIONERS.

New Orleans has destroyed 250,000 surface cisterns as a mosquito eradicating measure at a cost of probably $250,000,000.

New Orleans has lowered the water level in its soil by 12 feet through the installation of a remarkable drainage system, and has also installed a highly efficient sewerage and pure water supply system. These facilities cost $40,000,000 of public money.

New Orleans is now planning a traffic tube under the Mississippi River, is building a great industrial school, is conducting important classes in Spanish and Spanish-American commerce, is promoting the drainage and cultivation of the lowlands surrounding the city, and has created an Association of Commerce with 4,326 members for the promotion of the city's growth and prosperity.

New Orleans is the second port in the United States, ranking next to New York in value of import and export commerce, and has deliberately planned its development with a view of drawing the in and out commerce of twenty-one states in the Mississippi Valley to its wharves and warehouses. It aspires to become known some day as "First Port, U. S. A."

## Two Dollars For One.

"From saving comes having."

"A rolling stone gathers no moss."

It was with the two above axioms in mind that the New Departure Manufacturing Company, Bristol, Conn., recently adopted the General Motors savings plan, which is already in force in a large number of the plants belonging to the General Motors organization, and which is proving a big success in each of the plants in which it has been inaugurated, because of its simplicity and the soundness of the proposition. The movement is a plan to get an organization for saving that is simple and easily understood before the employees, especially one which will instill in the employees the habit of regulor saving. The fundamental ideas of the movement, as expressed in the two axioms, is to encourage thrift and saving among the employees of the organization and also to hold them with the same organization for a period of five years or more, to the common advantage of employer and employee alike.

By this plan, each employee can deposit any amount, up to ten per cent of his salary, each month, provided that his deposits for a year do not total more than $300. Deposits made during any month in the year will draw interest from the first of the month following the date when they were made. For instance, any sum paid into the savings fund by a member during the month of September will draw interest beginning October 1, following. This method was adopted as it is the rule followed by all the banking institutions of the country.

The results of this savings plan really begin to show themselves one year after the first deposit was made in the class year. Then it is that the deposits of the participant begin to receive credits from the investment fund of the company. The deposits of each succeeding month of the preceding year are credited by one-fifth as the corresponding month rolls around. This is continued for five years. This makes the credits of the deposits equal to the deposits themselves and this is placed to the credit of the depositor, together with the original investment and interest on each of these amounts at six per cent compounded semi-annually from the date of the first deposit.

For instance, if an employee deposits $5 each month for a year, the total savings for one year will be $60. Six per cent interest compounded semi-annually on this for five years would total $22.85. The credits given by the company from the investment fund, equalling the deposits, would be $60. The interest on this would also be $22.85. The aggregate sum of these figures is $165.70, which amount would be collectable by the depositor five years after the last payment is made. In other words, the employee realizes 176 per cent interest on his investment, in addition to the original savings.

The paid up life insurance feature of this savings plan is a very liberal one. No physical examinations of the applicants are required, and when an employee enters as a participant of the savings plan, he automatically insures his life.

The amount of insurance is governed entirely by, and depends altogether upon, the amount invested by the employee enters the class, or first, year. Should death occur to the depositor at any time after entering a class and within the five-year period, for every dollar put into the savings fund by the employee, the company will pay two dollars to the family, or other chosen beneficiary of the dead investor. All interest that has accumulated on the savings up to the time of the death of the employee will also be paid the beneficiary.

As an example of this, if the employee who makes a regular deposit of $5 a month, should die six months after his first deposit, the sum of $60.76, or twice the amount he has paid in the six months and interest on same, would be paid by the company. The insurance ceases at the end of the sixth year when the savings mature and the full amount of $165.70 is collectable. In order to prevent any one from being confused by the statement that savings do not mature until the end of the sixth year, it might be said that the first year of the six is the year in which the payments are made. The five-year period starts immediately after the payments are completed.

And why should a company be willing to operate a plan of this kind? Because the amount paid out by a firm in this manner is more than repaid in the more efficient service rendered by the operatives who, because of this plan, remain with the company for at least six years. Much has been written on the cost of "breaking in" a new employee, and the loss in production sustained while doing so. This is eliminated to a great extent by the adoption of this and similar plans, which hold an employee with the company for a longer average period of time and thus avoids the expense of breaking in a new man.

This plan of saving is well worth the consideration of every employer of labor, as at the present time there are perhaps more frequent changes in the jobs of the operatives than is normally the case.

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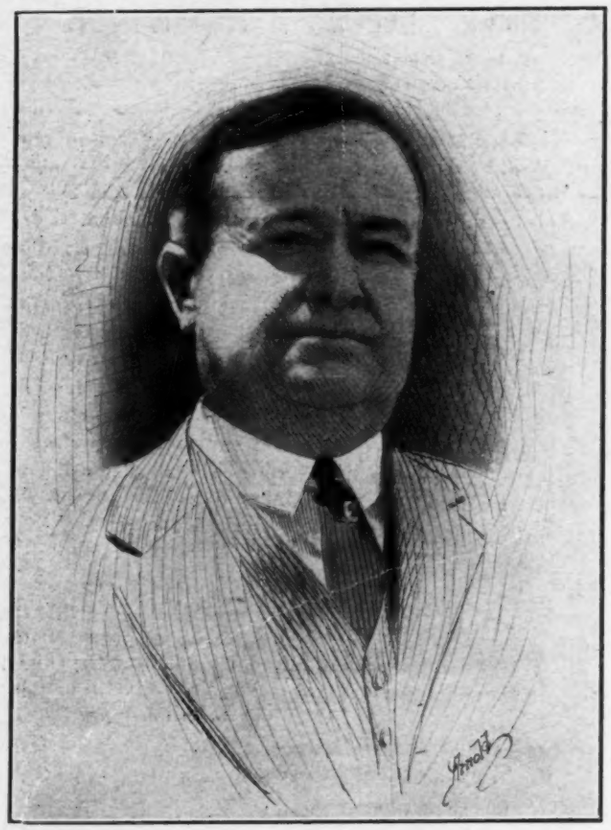
Harry J. Lindsley, who has been western sales manager of the Bound Brook Oil-less Bearing Company, of Bound Brook, N. J., for the past seven years, and William F. Jennings, who has been eastern sales manager of the same company for the past five years, have been made vice-presidents of their company in recognition of services rendered the firm during their connection therewith.

# The World Cotton Conference

The World Cotton Conference, which is to be held at New Orleans on the 13th, 14th, 15th and 16th of this month, will undoubtedly include the largest number of influential men from the allied branches of the cotton industry ever before assembled in a joint meeting. Nearly thirty countries will be represented and the domestic and foreign delegates will include a dozen or more classifications. It is impossible to accurately estimate the amount of invested capital represented by the delegates or the total annual value of the materials produced by their diversified interests. With the world, or a large part thereof, struggling with the problems of reconstruction, the time is opportune for the readjusting, if not the entire rebuilding, of many of the antiquated methods still used in the production and marketing of that wonderful white staple which has made the South a prosperous agricultural and manufacturing center.



Fuller E. Callaway.

In common with all other representatives of southern business, Cotton, and the organization behind it, welcomes the delegates from other sections of this country and from the many foreign countries that are represented at this, the third, International or World Cotton Conference.

In thus extending a greeting to the visitors, it is only fitting that the place of honor upon this page should be given to a southern man; a manufacturer by trade; a banker by profession; a farmer by choice; and a man known almost as well abroad as among the red hills of Georgia where his name is synonymous with successful administration; the worthy chairman of the European Commission for the World Cotton Conference, Fuller E. Callaway, who joins with his colleagues in bidding you welcome to his home section—The South.

### Object and Purposes of the Conference.

For several years the conviction has steadily been gaining ground that the producers and manufacturers of cotton, both at home and abroad, were facing far-reaching, drastic changes which would involve profound alterations in every branch of the industry. The war has served to emphasize this conviction and to clearly point out that the successful solution of the problem demands the exercise of statesmanship and economic foresight of the highest order. Never has the industry been confronted with more momentous economic questions than those with which it now has to deal in the cooperative adjustment of its many-sided affairs as a result of conditions into which the exigencies of war and post-war have thrown it.

Going still farther back: no essential industry having to do with a commodity of such value and importance as cotton is in greater need of reforms in the methods in vogue of handling its product. During this transformation cotton passes through many hands and undertakes long journeyings. A generation of precedent is responsible for an uncoordinated and unscientific method of operation. It is the sincere hope and belief of the promoters of the World Cotton Conference that it can and will do much to clarify the situation and bring about practical, satisfying solutions of these problems.

We of the United States had become accustomed to look upon cotton as our own product, our monopoly, something with which we could do as we pleased, forgetting the fact that monopolies carry obligations as well as benefits to their possessors.

Because American cotton has always been ginned, sampled, compressed, baled, financed, warehoused, and transported according to ancient and antiquated methods is no reason why these practices should continue; is no reason why modern methods should not be introduced.

Because cotton is ginned, compressed, graded and baled according to different standards in every country that grows the staple is no reason why the producers and handlers in the different countries should not get together and adopt uniform standards that would mean so much to the consuming trade.

Because cotton is now grown in something of a haphazard fashion throughout the cotton producing world, without system or regard for the world's needs at the particular season, thus producing a glut or a scarcity at times, is no reason why the growing of the staple could not be allocated to some central committee among the producing countries with due regard for the special needs of the particular season.

It is for a discussion of these features from a world viewpoint that the cotton conference at New Orleans is to be a World Cotton Conference.

It is for this and similar purposes that delegates from

every cotton producing country and from nearly every country that spins cotton are to be in attendance.

These are the reasons why there will be so many eminent speakers present, all authorities on their respective branches of the industry, who will treat cotton from an international as well as a local standpoint.

Conferences and conventions among members of an industry or allied industries are always productive of beneficial results. They make clear much of the misunderstanding that often befogs the atmosphere between people widely separated geographically. They make for a better and more intimate acquaintance and a clearer comprehension of the point of view of others. They make for confidence and good will that can be fostered in no other way. It will be the endeavor of the conference, through these speakers and through the committees that will hold special sessions while the conference is in progress, to so clarify such matters by pointing out the right way that immediate, constructive results will follow.

It is needless to say why the United States has been chosen for the meeting place of the World Cotton Conference. Here is annually produced between 62 and 67 per cent of the world's raw cotton. This is sufficient reason to qualify America as the fitting meeting place for such a conference.

It is equally advisable that a southern, rather than a northern city should be selected. New Orleans is, by far, the largest southern city and is the chief gulf seaport. Although Galveston has, of late years, slightly surpassed the Crescent City in the volume of cotton handled for export, yet the latter is well ahead in general tonnage and is so well known from a historical standpoint that its selection is but logical. New Orleans, too, is well equipped with hotels and other accommodations and has, time and again, justified its selection as a convention city. Under the leadership of a committee of its representative citizens, the city has prepared a most ambitious plan of entertainment and instruction.

The month of October in southern Louisiana offers the most delightful climate imaginable. In the month of October, too, the cotton season is at its height. Every field, ginhouse, compress, warehouse, railway siding and steamship landing is alive with activity. Seed cotton, lint cotton, baled cotton, is everywhere in evidence. In nearby country districts where warehouse room and siding platform are inadequate, bales of cotton are often seen stored in streets, yards, and other vacant places awaiting transportation to destination, to the spinning mills of the South, of New England, and of the world.

### Results To Be Expected.

Following are brief extracts from opinions expressed by men more or less closely connected with the Conference on the future possibilities and results that may be derived from the meeting to be held in New Orleans in October.

Samuel L. Rogers, Director of the Census at Washington, and Chairman of the Committee on Research, Reports and Statistics:

"The World Cotton Conference should bring about results more far-reaching than any similar meeting ever held. Because of the upheaval in Europe, tradition and custom have less weight than heretofore, while coordination and cooperation should result in reforms and bring about changes in the cotton industry which have for years been required.

"From the standpoint of the Committee on Research, Reports and Statistics, we will show the necessity for reliable statistics as to the progress of the cotton crop, the rapidity of its harvesting, its movement and consumption, and stocks held. We hope to interest and secure the active cooperation of the several governments in order that the proper machinery may be set up to collect reliable data concerning the industry.

"While the bulk of the cotton crop is produced in a very few countries, considerable quantities are grown in many lands. The liquidity of cotton, so to speak, makes necessary a knowledge of the world's entire production since all of it flows to the manufacturing centers. It sometimes happens that the crop is largely a failure in one country and that this shortage be made up in another. It is, therefore, important for the cotton grower, the handler and the manufactuer to know the situation regarding cotton, not only in one county, one section, one state or one country, but throughout the world.

"The American government has afforded a fairly complete system of cotton reporting. Governmental agencies in a number of other countries are collecting more or less information regarding this commodity. As a rule, however, the information is fragmentary and incomplete, and involves a large amount of estimation. It is obvious that the necessary machinery should be set up, with powers to collect completely and promptly, data concerning the cotton movement throughout the entire world. It would seem, therefore, of the greatest importance that the attention of the authorities in the several countries be directed to the importance of complete information concerning cotton, and that systems of reporting be established in each of them which will make possible world-wide reports, which must inure to the benefit of all legitimate interests connected with the industry.

"The work of our committee will be in line with this policy."

James D. Hammett, President of the American Cotton Manufacturers' Association and Chairman of the Committee on Permanent Organization:

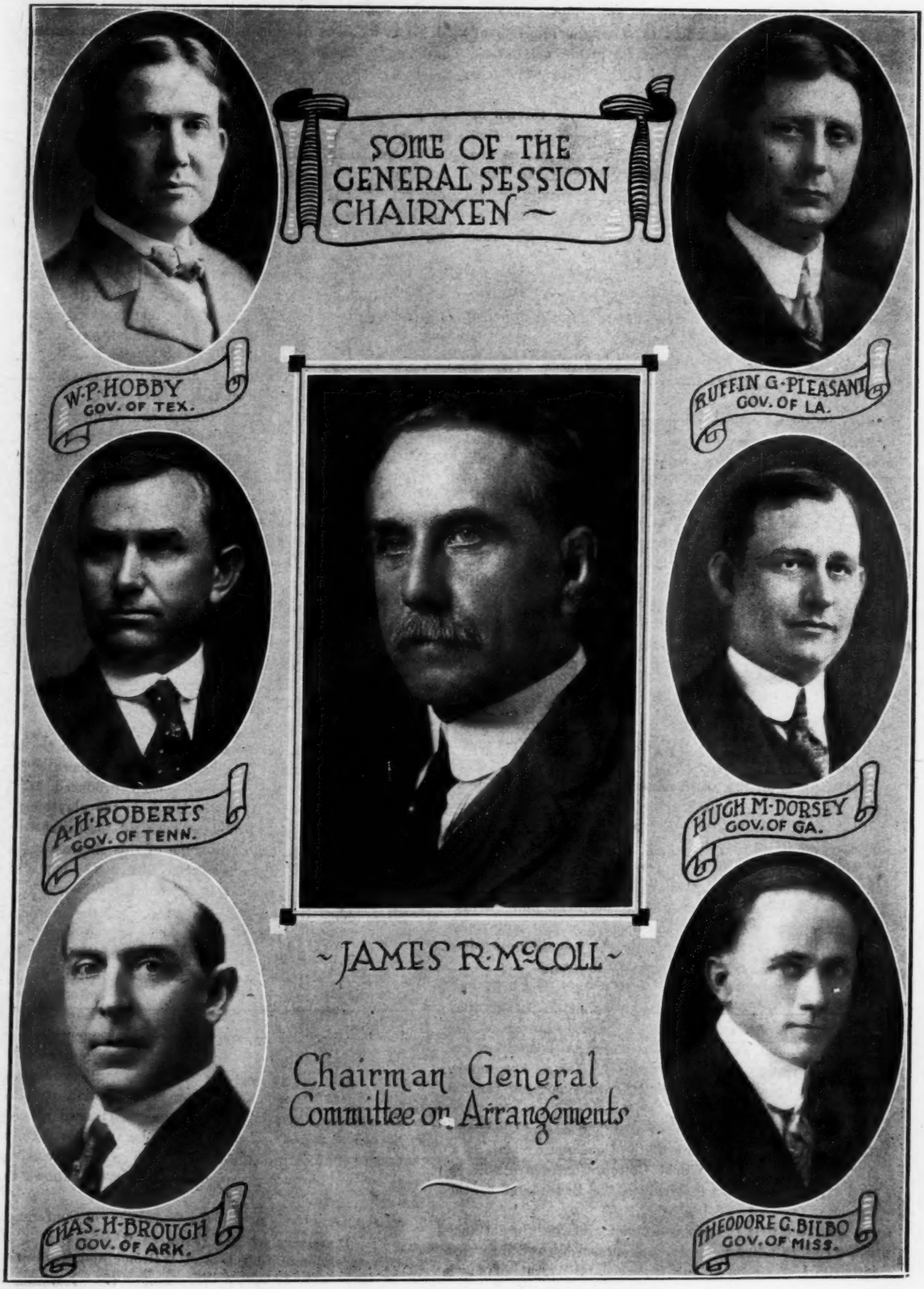
"The World Cotton Conference to be held in New Orleans in October next is, as I understand it, to be a very large gathering of men from all over the world who are interested in the production, distribution and manufacture of cotton.

"There is to be a very large number of very able men in this Conference, and the discussions to be entered into must, necessarily, be of vast importance to everyone connected with cotton from the producer to the consumer.

"It is not the purpose of the World Cotton Conference to antagonize any other organization, but rather seeks to cooperate with all other organizations which have the welfare of everyone interested in cotton at heart.

"There is no better way for men to understand each other satisfactorily than to get together in a friendly, but earnest manner and endeavor to gain the viewpoint of the other fellow. Personal contact with our fellow-man naturally broadens our vision and makes us more tolerant of the viewpoint of our neighbor.

"In the writer's judgment a very large proportion of the men of the world are honest at heart, and are inclined to do that which is right, and to serve humanity to the very best of their ability. At times all of us form false ideas as to the ultimate object of our neighbors, but if we are brought together in close communion with our neighbors,


SOME OF THE GENERAL SESSION CHAIRMEN
W. P. HOBBY GOV. OF TEX.
RUFFIN G. PLEASANT GOV. OF LA.
A. H. ROBERTS GOV. OF TENN.
HUGH M. DORSEY GOV. OF GA.
JAMES R. McCOLL
Chairman General Committee on Arrangements
CHAS. H. BROUGH GOV. OF ARK.
THEODORE G. BILBO GOV. OF MISS.

differences readily disappear, and we are brought together in a friendly and earnest effort to serve the interests of all, and when that situation is brought about, narrowness and selfishness are in most cases relegated to the background.

"I do not believe it is in the interest of the foreign or domestic spinner to unduly suppress the price of cotton so that the producer of cotton shall not reap a just reward for his toil. On the other hand I believe that the world has rapidly absorbed the idea that the profitable production of cotton is necessary not only to the producer, but to the world as a whole, and I do not feel that those who represent the better thought of the northern or foreign manufacturer of cotton goods would have the production of cotton again placed on an unprofitable basis. I do feel, however, that it is much in the interest of the producer and the manufacturer and the consumer that some means be adopted, if possible, whereby stability may be given to the cotton market and in that way relieve the cotton producer and the cotton manufacturer from occupying a speculative position in their particular business all the time.

"It is not within my province to attempt to suggest just how this stability may be brought about, but I am firmly of the opinion that while the exchanges of the country are necessary both to the producer and the manufacturer, the exchanges should make rules which would enable sellers of cotton to tender on their contracts cotton stored in a number of standard warehouses located throughout the South, and if necessary arrange so that the freight rate would enter into the contract and the tender of delivery.

"In my judgment the Conference at New Orleans is of vast importance to everyone in the South, and everyone in the South should cooperate to the fullest extent in making it a success."

L. K. Salsbury, President of the Delta and Pine Land Company of Mississippi, with 16,000 acres of cotton under cultivation; also Chairman of the Committee on Warehousing and Country Damage:

"Nothing in all the world is as valuable to any business as for all people interested in that business to get together

"Personal acquaintance overcomes a world of suspicion and gives confidence.

"One person interested in a certain enterprise and having no connection with other persons interested in other branches of the same enterprise or business, and having no acquaintance with such other persons, oftimes imagines that branch of the business of which he has no knowledge has the easy time and the big end of the profits.

"A better acquaintance or getting together will enlighten both parties and prove one cannot do without the other. Therefore, neither is existing at the expense of the other; and I know of no business where this condition exists as much as in the cotton business. Hence, the importance of all interests getting together and working for the common cause."

Charles H. Brough, Governor of Arkansas and Chairman of the Fifth General Session of the Conference:

"I believe that the World Cotton Conference will be productive of permanent good to the South and to the Nation.

"The fact that particular problems of vast importance to the cotton industry are to be discussed by well informed authorities augurs well for the accomplishment of much good. Cotton is still 'King' in the South, and therefore the careful consideration of such questions as growing, seed selection, methods of cultivation and picking and ginning, uniform baling and compressing, warehousing and country damage, transportation and insurance, exchanges, classification and purchases, foreign and export, and stabilization of production and prices will be of incalculable good to the farmers and business men of our southland.

"I believe that the organization of the Cotton Exports Association which was made possible under the amended Federal Reserve Act, has already tended to make the cotton market more stable and prevent discrimination in foreign cotton exchange. The problems of reconstruction are so far-reaching and vital and the South occupies such an advantageous position in the industrial and commercial world of today, that I believe this meeting of the World Cotton Conference will be epochable in its effect on business conditions throughout the Nation and throughout the world."

Theo. G. Bilbo, Governor of Mississippi and Chairman of the Seventh General Session:

"With the proper understanding and cooperation between the cotton grower, cotton manufacturer, with due regard for the right of the consumer of the manufactured product, success can be brought to all and justice denied to none.

"The World Cotton Conference is trying to perfect the mission. Conscienceless cotton speculators steal from the grower, impose on the manufacturer and rob the consumer. They should be looked upon as a common enemy and eliminated. Great prosperity awaits the cotton growing states of the South when the product is handled upon an honest basis and protected from the time it leaves the hand of the grower until it is placed upon the back of the teeming millions of the earth that must have it."

W. P. Hobby, Governor of Texas and Chairman of the Second General Session:

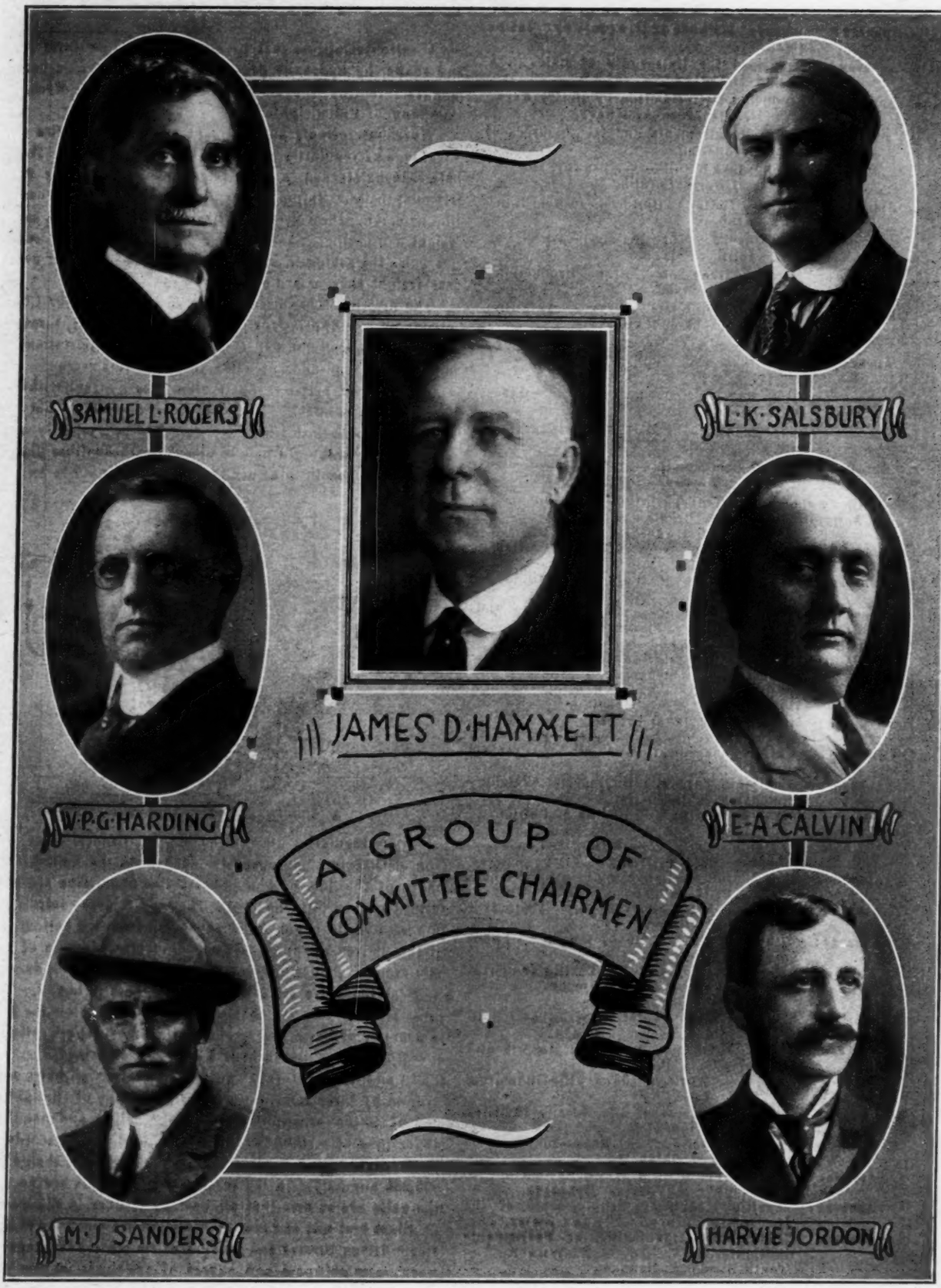
"In my opinion, the world has become wiser in the last few years in regard to the value of the southern cotton crop. Heretofore, that which has been produced in the Cotton Belt of the United States has been the plaything of the speculators and the producer has paid the expenses of the world's series games. The value of this staple has been fixed between four cents and twelve cents, as the manipulators willed, and the producer took what he could get.

"But today it is recalled that cotton, the staple, is worth its intrinsic value in the needs of the world, and never again will there be such manipulation that it will be depressed in the price to such a low point that it will not justify the expense of production. The cotton growers know they have a marketable product; they know that they have a necessary article and they will no longer allow the fruits of their toil to be taken from them. Organized effort, directed by intelligent plans and policies, will produce the result. There has never been an over-production of cotton, in my opinion, because the world has never used as much as the world needs. There ought to be no 'cheap' cotton, that has resulted from the hue and cry of those who have tried to beat down the price, while everyone knows that the value is unimpaired.

"I commend the efforts of the World Cotton Conference."

## Program of the General Sessions.

First Session: Addresses of Welcome and Replies.
*Chairman*, JAMES R. MCCOLL
*National Council of American Cotton Manufacturers.*




I. ADDRESS OF WELCOME by Governor of Louisiana and Mayor of New Orleans.

II. Response by Chairman of General Committee.

III. Response by Representatives of Foreign Delegates.

Second Session: The Growing and Handling of Cotton.

*Chairman*, HONORABLE W. P. HOBBY, *Governor of Texas.*

I. ADDRESS: "The Growing of Cotton." JOHN M. PARKER.
II. ADDRESS: "Improved Methods of Compressing." JAMES INGLIS.
III. ADDRESS: "The Need for Uniformity of Bales." A FOREIGN DELEGATE.
IV. ADDRESS: "Producing Better Cotton by Better Farming." DR. BRADFORD A. KNAPP.

Third Session: Future Requirements and New Sources of Production.

*Chairman*, HONORABLE THOMAS W. BICKETT
*Governor of North Carolina.*

I. ADDRESS: "Securing Better Cotton by Seed Selection." E. C. EWING.
II. ADDRESS: "The World's Future Requirements of Cotton." JOHN A. TODD.
III. ADDRESS: "New Sources of Cotton Production." DWIGHT. B. HEARD.

Fourth Session: The Storage and Insurance of Cotton.
*Chairman*, HONORABLE A. H. ROBERTS
*Governor of Tennessee.*

I. ADDRESS: "The Problem of Country Damage." E. A. CALVIN.
II. ADDRESS: "The Warehousing of Cotton." WILLIAM B. THOMPSON.
III. ADDRESS: "The Insurance of Cotton." MILTON DARGAN.
IV. ADDRESS: "Warehouse Receipts and Cotton Loans." J. HOWARD ARDREY.

Fifth Session: The Transportation of Cotton.
*Chairman*, HONORABLE CHARLES H. BROUGH,
*Governor of Arkansas.*

I. ADDRESS: "Transportation of Cotton by River." WALTER PARKER.
II. ADDRESS: "Transportation of Cotton by Rail." W. S. TURNER.
III. ADDRESS: "Transportation of Cotton Coastwise and Overseas." M. J. SANDERS.

Sixth Session: The Buying and Selling of Cotton.
*Chairman*, HONORABLE THOMAS E. KILBY,
*Governor of Alabama.*

I. ADDRESS: "Improved Methods of Financing Cotton." HONORABLE W. P. G. HARDING.
II. ADDRESS: "Cotton Exports and Foreign Exchange." ALBERT BRETON.
III. ADDRESS: "Uniform Classification of Cotton." CHARLES J. BRAND.
IV. ADDRESS: "Equitable Tare and Buying Net Weight." HONORABLE E. D. SMITH.

Seventh Session: The Buying and Selling of Cotton. (*continued*)
*Chairman*, HONORABLE THEODORE G. BILBO,
*Governor of Mississippi.*

I. ADDRESS: "The Cotton Exchange and Its Functions." ARTHUR R. MARSH.
II. ADDRESS: "Buying Cotton for Future Delivery." RANDALL N. DURFEE.
III. ADDRESS: "Stabilizing the Price of Cotton." THEODORE H. PRICE.

Eighth Session: World Problems of the Textile Industry.
*Chairman*, HONORABLE HUGH M. DORSEY,
*Governor of Georgia.*

I. ADDRESS: "International Regulation of Labor Conditions." SIR A. HERBERT DIXON.
II. ADDRESS: "An International System of Reports and Statistics." O. P. AUSTIN.
III. ADDRESS: "Research Work in the Textile Industry." E. D. WALEN.

Ninth Session: World Problems of the Textile Industry (*Continued*)
*Chairman*, HONORABLE J. D. A. ROBERTSON,
*Governor of Oklahoma.*

I. ADDRESS: "Should There Be a World System of Appointment." A FOREIGN DELEGATE.
II. ADDRESS: "Textile Machinery Requirements of the Immediate Future." E. KENT SWIFT.
III. ADDRESS: "Permanent Organization of Participants in Conference." RUFUS R. WILSON.

Tenth Session: Banquet.
*Toastmaster*, HONORABLE RUFFIN G. PLEASANT,
*Governor of Louisiana.*
SPEAKERS TO BE ANNOUNCED.

**The sessions of the Conference will be interspersed with various entertainment features, plans for which are in charge of the Local Committee on Arrangements.**

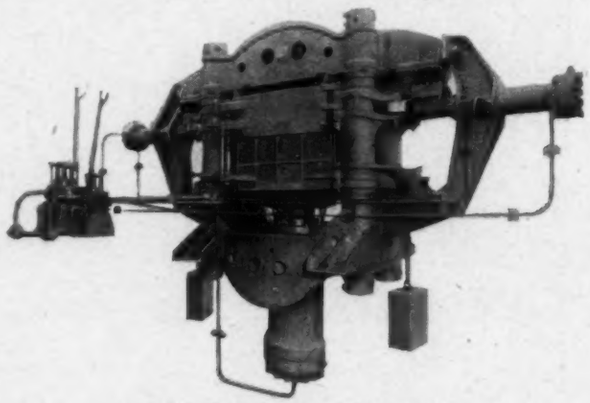
## A New Cotton Compress.

A cotton compress that produces bales of uniform size and shape, by hydraulic pressure from five sides, is being manufactured by the Southwark Foundry and Machine Company, of Philadelphia.

Warehouse owners and shippers will readily realize the advantage of regularity in size and shapes of bales. These bales can be stacked in tiers, requiring no bracing as with irregular bales. Shipments can be checked without handling or moving the bales. As it is claimed 60 per cent more weight can be placed in the same space occupied by ordinary bales the saving in storage space and reduction of overseas freight charges are apparent.

The first press has been purchased by the Harbor Commission of Los Angeles for installation at the port, through which the Commission expects to divert the exportation of hundreds of thousands of bales of cotton this season.

Although of massive construction, the hydraulic, three-ram press is compact. The press is submerged so that the bottom platen is flush with the floor. The operation is very simple. The bulky gin bale is placed on the bottom platen and under hydraulic pressure the doors are closed in on the



A 450-TON COTTON COMPRESS.

bale, thus regulating the width. Two horizontal rams, one from each end, simultaneously move in to the limit of the length of the finished bale. These two operations are performed by throwing one lever. The second lever controls the powerful vertical ram, which shoves up from the bottom until the desired thickness is reached. This reduction of the bale from five sides is accomplished in sixteen seconds.

Next the doors are opened and the bale is bound. The press is so constructed that clamping the bands on the bale is a matter of but a few seconds. Under actual operation a speed of sixty bales an hour has been maintained.

In addition to storage and freight savings on bales compresesd by three rams, there is the advantage of eliminating loss of cotton consequent upon poor baling and handling under present methods. This loss, according to records in the Department of Agriculture, amounts to more than $50,000,000 annually. In the three-ram process the surfaces of the bales are so firm that all wastage of fiber is eliminated.

Since first cost and cost of operation are much lower than steam driven presses and because of its other advantages to warehouses shippers and buyers of cotton, it is predicted that the three ram hydraulic press chosen by the Los Angeles Harbor Commissioners as being the most practical and modern method of compressing cotton, will supplant the more cumbersome and costly steam presses now in use.

# And in the Meantime

Delegates attending the World Cotton Conference, between the hours consumed by the steady grinding work of the sessions, will be seeking rest and refreshment. Many private exploring parties will wander through the by-ways of the historic old city, some in the care of friendly guides, others going "on their own" being unwilling to lose the joy that goes with personal discovery. In this connection the following comments by a writer in *Associated Advertising* are opportune:

"To be a gourmet, a connoisseur of delicate variations in tastes was once the pride of kings and courtiers. Henry the Great—and ponderous—admitted openly that one of his chief delights lay in occasional trencherman duels with his boisterous henchmen. Lucullus and Epicurus, Pantagruel and Brillat-Savarin, and—shall we say it?—later celebrities, such as Sarah Bernhardt and William Taft, all have taken more or less open delight in gustatory adventures.

"But now, today, in the year of our false modesty, 1919, there are few of us who are willing to confess we would travel a thousand leagues to sense the poignant thrills of a new taste, that we would place upon the dais the chef who could bring back to our jaded, wornout palates the joys of boyhood's blackberry pie days. Yet that is true.

"Your overseas soldier remembers more about the doughnut which Salvation Nell handed him after his racking stretch in the trenches than he does about the first time he faced shell fire. Your traveler speaks at length of his meal at Ciro's, but has only a vague memory of Napoleon's magnificent mausoleum. Even your wife rarely fails to describe minutely a new pleasing dish she had at Mrs. Pursefull's latest shindig.

"Unfortunately, there is but one Mecca in the United States for the dyspeptic, but one island of delight whose friendly shores promise certain haven to the appetite wrecked upon the shores of papier mache banquets, or sadly enough, upon the drab and bleak coast of home cooking.

"This promised land for the worn-out sybarite, the average business man, is New Orleans of course. Those who can do so remain for aye, for there is no other place where food preparation is regarded as an art, nor where that art is replete with so many masterpieces.

"Julian Street wrote that he considered Antoine's restaurant in the French quarter of New Orleans the best in the world. Others of us who have plied the knife and fork in many lands endorse Mr. Street's opinion, and also rank as best restaurants the Louisiana, Galatoire's, Maylie's and Madame Begue's. The latter two we would limit to the best noon-breakfast restaurants.

"Of Antoine's there has been much written. There have been poems, monodies, extravaganzas, laudatory articles. No superlative has been too far-fetched, however, in describing it. Clem G. Hearsey, a journalist of national reputation, declared that the modest-looking house of Antoine bears the same relation to quaint and delicious dishes that the name of Morgan bears to Wall Street.

" 'The story of Pere Antoine, the founder of the house,' Mr. Hearsey wrote, 'is as much a part of the story of old Creole days in the South, as is the history of the Cabildo or the tale of Lafitte, the King of Barataria, and his pirate crew. The refined art of cooking, the science of the skillet and the chafing dish, was the mission of Antoine and his sons, and from the early days when the glamor of the grandees and grandissimes was just beginning to show tawdry and dull from contact with budding commercialism, Antoine and his sons have played their part; and mention Antoine on the boulevards of Paris, the Strand of London, the Great White Way of New York, or in any American city where the *bon vivant* is to be found, and lips will smack in pleasant remembrance for a return date with some dish that might have won from a Vitellius the gift of a province.

"Do not worry about what you have to order. Just tell the waiter how you feel, and that sympathetic soul will be certain to accord with your fancies. Here are some of the dishes with which he will do it!

"Huitres en Coquille a la Rockfeller—oysters baked in their shells with such rich ingredients that the name of the multi-millionaire was borrowed to indicate their value. Tomatoes Frappe a la Jules Cesar—iced tomatoes for hot weather. Bisque Ecrivisses a la Cardinal—a soup made of crayfish boiled in white wine, pounded into a pulp, with an addition of cream and aromatic herbs and then strained through fine, white silk. Truitre Saumonnee Rupinicoscoff—salmon trout prepared according to the recipe of a famous Muscovite chef, Alexandrovitch Rupinicoscoff, whose recipe was given to Jules, the son of Antoine on the condition that its composition never be divulged.

"These dishes, and many others like them, may also be obtained at 'La Louisiana'—a restaurant conducted by an other son of old Antoine.

"A wholesome French meal with wine will be served at Galatoire's—spicy river shrimp on ice, stuffed plantains, tasty gumbo soup, tender morsels of dainty pompano.

"In the morning you will not fail to stroll through what is affectionately termed the 'vieux carree,' or the old town of New Orleans. A curious meander in search of cool courtyards hidden back of stained old walls will no doubt lengthen your exercise beyond your original intention; and, finding yourself upon the waterfront, you will stop at the eating-place of Madame Begue for one of her famous breakfasts.

"At Begue's you will see a husky group of French meat venders sitting about the groaning board. According to their custom, they have carried a side of beef or a huge redfish, perhaps both, to the Madame's cuisine and have said: 'Cook this for our breakfast.' Of course, more of this is brought to the restaurant than is consumed by the hearty breakfasters, and Madame usually has enough left to provide the staples for the evening meal. By this method of exchange with her friends she is able to supply a bounteous meal at moderate cost.

"Breakfast at Madame Begue's means a meal of many courses. Eeveryone sits around one or two long tables, makes his own sauces and dressings out of a complete outlay of oils, vinegar, bird's-eye peppers and other appetizers at hand and indulges in friendly discourse with his neighbors. Maylie's, near the Poydras market, is operated on a similar plan.

"At the old Absinthe house founded in the early days of the history of the United States, you will see the discolored marble slab with holes worn through it by the occasional drops of water which, falling from the faucet above it, have escaped the glass, On the walls of the restaurant here you will find crayon sketches of prominent men, made during their lives by successive talented diners."

# Who's Who Among the Delegates

## Foreign Delegates.

COTTON SPINNERS AND MANUFACTURERS ASSOCIATION DELEGATES—ENGLAND

J. A. Addison, Manchester.
Arthur Foster, Preston.
F. A. Hargreaves, Burnley.
James Smith, Blackburn.
John Taylor, Bridgewater Mill, Blackburn.
Fred Thornber, Thornber, Benjamin & Sons, Ltd., Burnley
J. T. Walmsley, Walmsley & Co., Accrington.

FEDERATION OF MASTER COTTON SPINNERS' ASSOCIATIONS, LTD.—ENGLAND

William Hamer, Birch House, Ashton-under-Lyne
Fred Holroyd, "Overgate" Elland, York
J. M. Thomas, Crawford Spinning Co., Ltd., Rochdale
Jesse Thorpe, 21 Queen's Road, Oldham
R. Threlfall, Laburnum Spinning Co., Ltd., Atherton
R. W. Worswick, Hall Carr Mills, Rawtenstall

THE MANCHESTER COTTON ASSOCIATION LIMITED DELEGATES—ENGLAND

Richard Hamer, President The Manchester Cotton Association, Ltd., 22 St. Mary's Gate, Manchester.
A. B. Ireland, C. W. Ireland & Co., 10 Hopewood Avenue, Manchester.
H. W. Macalister, Springhead Spinning Co., Ltd., Manchester.
H. Robinson, Sec'y The Manchester Cotton Ass'n, Ltd., 22 St. Mary's Gate, Manchester.
F. A. Tomlinson, C. Tattersall & Co., Manchester.

NEW ORLEANS COTTON EXCHANGE DELEGATE—ENGLAND.

R. H. Hooper, Liverpool.

## National Association Delegates.

BRAZIL

Salvado R. Gama, P. O. Box 143, Rio de Janeiro

CANADA

F. G. Daniels, Dominion Textile Co., Ltd., Montreal, Quebec.
George Francis Payne, Dominion Textile Co., Ltd., Montreal, Quebec.

CONNECTICUT

Elliott A. Allen, The S K F Ball Bearing Co., Hartford.
John T. Almy, Attawaugan Co., Norwich.
Obadiah Butler, Conn. Mills Co., Inc., Danielson
Grosvenor Ely, Ashland Cotton Co., Norwich.
John S. Merchant, Mohegan Cotton Mill, New London
John R. Montgomery, The J. R. Montgomery Co., Windsor Locks.
Winthrop B. Nye, Putman Mfg. Co., Putman
William E. Peck, The Baltim Mills Co., Baltic
Archer J. Smith, The American Mills Co., Waterbury.
George A. Vaughn, The Putman Mills Co., Thompson.

DELAWARE

E. A. Sisson, Keystone Fibre Co., Yorklyn.

INDIANA

Lee Rodman, Indiana Cotton Mills, Cannelton

ILLINOIS

Ralph E. McCausland, Barber-Colman Co., Rockford

KENTUCKY

Philip S. Tuley, Louisville Cotton Mills, Louisville.

MAINE

James E. Coburn, Androscoggin Mills, Lewiston
Philip Dana, Dana Warp Mills, Westbrook
H. Garland, Garland Mfg. Co., Saco
Elmer E. Page, York Mfg. Co., Saco

MARYLAND

James A. Gary, 722 Equitable Building, Baltimore
William E. Hooper, William E. Hooper & Sons Co., Baltimore

MASSACHUSETTS

George B. Adams, Adams Bros. Mfg. Co., Adams
Arthur C. Almy, Arthur C. Almy Co., 89 State St., Boston
Frederic Amory, Nashua Mfg. Co., 82 Devonshire St., Boston
Robert Amory, Amory, Browne & Co., 48 Franklin St., Boston
William Amory, Pepperell Mfg. Co., 141 Milk St., Boston
Frederick H. Andres, 53 State St., Boston
Nathaniel F. Ayer, Nyanza Mills, 70 Kilby St., Boston
Harry L. Bailey, Wellington, Sears & Co., 89 Franklin St., Boston
Joseph W. Ballard, Griswoldville Mfg. Co., Griswoldville
William L. Barrell, Lawrence Duck Co., Lawrence
Albert Farwell Bemis, Bemis Bros. Bag Co., 40 Central St., Boston
Frederick H. Bishop, Universal Winding Company, Boston
Harry H. Blunt, Wonalancet Co., 10 High St., Boston
Sydney H. Borden, Durfee Mills, Fall River
John Schofield Boyd, John S. Boyd Co., State Road, Williamstown
Arthur T. Bradlee, Whitman Co., Inc., 78 Chauncy St., Boston
Walter H. Bradley, Pepperell Mfg. Co., 141 Milk St., Boston
Thomas E. Brayton, Union Cotton Mfg. Co., Fall River
William L. S. Brayton, Sagamore Mfg. Co., Fall River
S. Parker Bremer, Parker, Wilder & Co., 4 Winthrop Sq., Boston
Isaac A. Brown, Narragansett Mills, Fall River.
M. R. Brown, Daval Mills, Fall River
W. Irving Bullard, Merchants National Bank, Boston
Robert Burgess, Maverick Mills, Boston
Charles E. Burleigh, General Electric Co., 84 State St., Boston
Morgan Butler, Butler Mill, 77 Franklin St., Boston
William B. Butler, Butler, New Bedford & Quissett Mills, Boston
Frank L. Carpenter, Davis Mills, Fall River
Charles B. Chase, Stevens Mfg. Co., Fall River
Simeon B. Chase, King Philip Mills, Fall River
Charles E. Childs, Hampton Co., Northampton
John R. C. Church, Monument Mills, Great Barrington
Thomas J. Clexton, A. Klipstein & Co., 285 Congress St., Boston
Morris L. Comey, West Boylston Mfg. Co., Easthampton
Frank B. Comins, American Moistening Co., Boston
Edmund W. Converse, Converse, Stanton & Co., Boston
Edward H. Cook, Quisset Mills, New Bedford
Peter H. Corr, Greenwich Bleachery, Taunton
Leonard W. Cronkhite, The L. W. Cronkhite Co., Boston
Daniel J. Danker, 73 Dean Road, Brookline
George Delano, Bourne Mills, Fall River
Frederick N. Dillon, D. M. Dillon Steam Boiler Works, Pittsburgh
George A. Draper, Draper Corporation, Hopedale
George O. Draper, Hopedale Mfg. Co., Milford
Fredrick C. Dumaine, Amoskeag Mfg. Co., 64 Ames Bldg., Boston
Albert Greene Duncan, Harmony Mills, Boston
Nathan Durfee, American Printing Co., Fall River
Randall N. Durfee, Border City Mfg. Co., Fall River
Frank J. Dutcher, Draper Corporation, Hopedale
Charles H. Ely, Monks & Johnson, 99 Chauncy St., Boston
George P. Erhard, Stafford Co., Readville
Francis W. Fabyan, Otis Co., 72 Franklin St., Boston
J. Richard Fales, Shawmut Mills, Inc., Fall River
William Firth, American Moistening Co., Boston
Charles H. Fish, 1009 Tremont Bldg., Boston
Andrew Fisher, Jr., Wentworth Bldg., 170 Summer St., Boston
Frederick A. Flather, Boott Mills, 79 Milk St., Boston
E. T. Fowler, Foster Machine Co., Westfield
Enoch J. French, Weetomoe Mills, Fall River
Arnold C. Gardner, Manomet Mills, 1 Clinton Place, New Bedford
George L. Gilmore, K. M. Gilmore & Co., Somerville
Joseph R. Glennon, Nemasket Mills, Taunton
Thomas F. Glennon, Quissett Mill, New Bedford
Luther C. Goodrich, American Moistening Co., Boston
George P. Grant, Jr., Grant Yarn Co., Fitchburg
Edwin Farnham Greene, Pacific Mills, 60 Federal St., Boston
S. Harold Greene, International Cotton Mills, Boston
Henry F. Grinnell, Chase Mills, Fall River
Frank J. Hale, Saco-Lowell Shops, 77 Franklin St., Boston
William D. Hartshorne, 40 Pleasant Street, Methuen
William B. Hawes, P. O. Box 733, Fall River
Charles M. Holmes, Holmes Mfg. Co., New Bedford
John H. Holt, Stafford Mills, Fall River
Ernest N. Hood, Acadia Mills, 78 Chauncy St., Boston
H. H. Horton, Troy Cotton & Wool Manufactory, Fall River
Melvin B. Horton, Mechanics Mills, Fall River
Earl E. Howard, Crompton & Knowles Loom Works, Worchester
Henry S. Howe, Lawrence & Co., 89 Franklin St., Boston
James Carlton Howe, Old Colony Trust Co., 17 Court St., Boston
Joseph B. Jamieson, Yale Knitting Co., 77 Summer St., Boston
William H. Jennings, Treas., Algonquin Printing Co., Fall River
Lawrence M. Keeler, Whitin Machine Works, Whitinsville
Henry P. Kendall, 60 Congress St., Boston
William E. Kern, Jr., Taber Mill, New Bedford
Nathaniel Kinsman, Choremi, Benachi & Co., 53 State St., Boston
Lucius J. Knowles, Crompton & Knowles Loom Works, Worcester
L. H. Kunhardt, Boston Manufacturers' Life Ins., Co., Boston
Walter H. Langshaw, Dartmouth Mfg. Co., New Bedford
Leonard C. Lapham, Nonquitt Spinning Co., New Bedford
James Lawrence, McFadden, Sands & Co., 141 Milk St., Boston
John S. Lawrence, Lawrence & Co., 89 Franklin St., Boston
Ralph Lawson, John Malloch & Co., 20 Milk St., Boston
Russell H. Leonard, Wampanoag Mills, Fall River
Tracy S. Lewis, Taunton Cotton Mills, East Taunton
Edward V. Livesey, Standard Fabric Co., Fall River
Henry G. Lord, Textile World Journal, Boston
Ernest Lovering, Dwight Mfg. Co., 50 State St., Boston
Arthur H. Lowe, Parkhill Mfg. Co., Fitchburg
Russell B. Lowe, Parkhill Mfg. Co., Fitchburg
Stephen C. Lowe, S. C. Lowe Supply Co., New Bedford
Herbert H. Marble, Treas. Arkwright Mills, Fall River

Albert G. Mason, Whitman Mills, New Bedford
Fred H. McDevitt, Soule Mill Corporation, New Bedford
Fred C. McDuffie, Everett Mills, 120 Franklin St., Boston
George H. McFadden, George H. McFadden & Bro., Boston
William N. McLane, Seaconnet Mills, Fall River
John H. Meyer, Springdale Finishing Co., Canton
Herbert Midgely, Howard Bros. Mfg. Co., Worcester
Albert D. Milliken, Hamilton Mfg. Co., Lowell
J. K. Milliken, Mount Hope Finishing Co., North Dighton
James T. Milne, Osborn Mills, Fall River
John Neild, Neild Manufacturing Corporation, New Bedford
J. Edwin Newton, Barnard Mfg. Co., Fall River
F. W. Nichols, Jr., Nobska Spinning Co., 77 Franklin St., Boston
Theodore O. Nicholson, C. E. Riley Co., 65 Franklin St., Boston
James E. Osborn, Merchants Mfg. Co., Fall River
Dana Osgood, Draper Corporation, Hopedale
Charles D. Owen, Jr., Beacon Mfg. Co., New Bedford
John E. Page, Central Mills Co., Southbridge
Walter Page, Page Mfg. Co., New Bedford
P. S. Palmer, Massasoit Mfg. Co., Fall River
Fred W. Parks, Parks-Cramer Co., Fitchburg
Andrew G.P ierce, Jr., Pierce Mfg. Co., New Bedford
Charles T. Plunkett, Berkshire Cotton Mfg. Co., Adams
Herbert G. Pratt, Samson Cordage Works, Boston
James M. Prendergast, 87 Milk St., Boston
Robert W. Prentice, Hoosac Cotton Mills, North Adams
Isaac T. Prosser, Chicopee Mfg. Corporation, Chicopee Falls
Andrew Raeburn, Wamsutta Mills, New Bedford
Benjamin B. Read, Lincoln Mfg. Co., Fall River
Frank W. Reynolds, Lockwood, Greene & Co., Boston
H. L. Reynolds, Whitinsville Cotton Mills, Whitinsville
John P. Reynolds, Suncook Mills, 30 State St., Boston
Raymond A. Rice, Southbridge Printing Co., Southbridge
Charles E. Riley, American Machine Co., 65 Franklin St., Boston
Richard G. Riley, King Philip Mills, Fall River
C. C. Rounseville, Shove Mills, Fall River
Albert L. Scott, International Cotton Mills, 60 Federal St., Boston
Henry F. Searles, Pilgrim Mills, Fall River
C. M. Shove, Granite Mills, Fall River
W. Frank Shove, Pocasset Mfg. Co., Fall River
Henry L. Sigourney, Lyman Mills, Holyoke
James Sinclair, Charlton Mills, Fall River
A. H. Skinner, Corr Mfg. Co., Taunton
John Skinner, West Boylston Mfg. Co., Easthampton
Abbott E. Slade, Laurel Lake Mills, Fall River
Abbott Smith, Kilburn Mill, 791 Purchase St., New Bedford
Albert G. Smith, Grant Yarn Co., Fitchburg
Joseph J. Smith, 200 Devonshire St., Boston
R. Paul Snelling, Saco-Lowell Shops, 77 Franklin St., Boston
Antonio Spencer, Spencer Yarn Co., Adamsdale
Fred W. Steele, Treas., Booth Mfg. Co., New Bedford
John A. Stevens, 8 Merrimack St., Lowell
Charles H Stone, Atlantic Dyestuff Co., 88 Ames Building, Boston
Malcolm B. Stone, Ludlow Mfg. Associates, Boston
James Strang, Saco-Lowell Shops, 77 Franklin St., Boston
John B. Strongman, City Mfg. Co., New Bedford
John Sullivan, Tabor Mill, New Bedford
E. Kent Swift, Whitin Machine Works, Whitinsville
Gay D. Thayer, Crompton Knowles Loom Works, Worcester
Gilbert Thornton Thompson, Berkshire Cotton Mfg. Co., Adams
James O. Thompson, Jr., New Bedford Cotton Mills Corporation, New Bedford
James Thomson, Fairhaven Mills, New Bedford
Philip E. Tripp, Ancona Co., Fall River
Walter H. Underdown, New Bedford Cotton Mills Corporation, New Bedford
Jude C. Wadleigh, Merrimack Mfg. Co., Lowell
Charles Walcott, Newmarket Mfg. Co., 87 Milk St., Boston
Robert S. Wallace, Fitchburg Yarn Co., Fitchburg
Joseph W. Webster, Grinnell Mfg. Co., New Bedford
Nelson D. White, N. D. White & Sons, Winchendon
Captain William P. White, Lowell Paper Tube Corporation, Lowell
Henry T. Whitin, Paul Whitin Mfg. Co., Northbridge
James Earle Whitin, James Whitin, Inc., North Uxbridge
Charles B. Wiggin, Wauregan Co., Boston
Orrin G. Wood, William A. Slater Mills, Inc., 89 State St., Boston
Robert W. Zuill, Cornell Mills, Fall River

### NEW HAMPSHIRE

Roscoe S. Milliken, Nashua Mfg. Co., Nashua
George W. Rooney, New Hampshire Spinning Mills, Penacook
William Parker Straw, Amoskeag Mfg. Co., Manchester
George A. Tenney, Monadnock Mills, Claremont
Fred E. Wattles, Boscasen Mills, Penacook

### NEW JERSEY

Albert Blum, United Piece Dye Works, Lodi
Charles A. McCormick, Chicopee Mfg. Corporation, New Brunswick
William L. Lyall, Brighton Mills, Passiac

### NEW YORK

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Edward W. Barnard, American Thread Co., N. Y. C.
Lewis M. Brander, Brander & Curry, 31 East 42nd St., N. Y. C.
James T. Broadbent, Agent Meritas Mills, 320 Broadway, N. Y. C.
John P. Campbell, Walcott & Campbell Spinning Co., New York Mills, Oneida Co.
George DeForest, Utica Steam & Mohawk Valley Cotton Mills, Utica
Nicholas E. Devereux, The Skenandoa Cotton Co., Utica
Daniel E. Douty, U. S. Conditioning & Testing Co., N. Y. C.
Alfred L. Ferguson, Windsor Print Works, 15 William Street, N. Y. C.
Andrew Frey, Oneita Knitting Mills, Utica
Beirne Gordon, Jr., Skenandoa Cotton Co., 21 Clinton Place, Utica
O. W. Gridley, Utica Knitting Mills, Utica
Harold G. Hansen, New York Commercial, New York City
Gurry Ellsworth Huggins, Beaver Mills, New York City
Francis K. Kernan, Sauquoit Spinning Co., Capron
Hubert D. Kernan, Skenandoa Cotton Co., Utica
Joel Irvine Lyle, 39 Cortlandt St., New York City
Henry F. Mansfield, Avalon Knitwear Co., Utica
John A. McGregor, Utica Steam & Mohawk Valley Cotton Mills, Utica
John E. McLoughlin, La Tosca Knitting Co., Utica
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Eugene C. Myrick, Fiskdale Finishing Co., 320 Broadway, N. Y. C.
John A. Perkins, Harmony Mills, Cohoes
John E. Rousmaniere, J. Spencer Turner Co., New York City
Newell W. Tilton, Harding, Tilton & Co., New York City
J. B. Upright, Saratoga Victory Mfg. Co., New York City
R. L. Van Dyke, American Thread Co., N. Y. C.
Malcolm D. Whitman, William Whitman Co., Inc., N. Y. C.
William E. Winchester, Lockwool Co., 79 Leonard St., N. Y. C.

### OHIO

Elliott H. Barnwell, Goodyear Tire & Rubber Co., Akron

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H. W. Butterworth, H. W. Butterworth & Sons, Philadelphia
Charles R. Delaney, J. S. Young & Co., Hanover
Earl S. Jenckes, Reading Cotton Mills, Wyomissing
E. K. Nelson, The Eddystone Mfg. Co., Philadelphia
Claude M. Plowman, C. M. Plowman & Co., Philadelphia
Albert E. Schofield, Delph Spinning Co., Philadelphia
W. P. Simpson, Eddystone Mfg. Co., Philadelphia
William T. Westerman, Ontario Spinning Co., 1729 Philip St., Philadelphia

### RHODE ISLAND

John Ormsbee Ames, 50 South Main St., Providence
Roland H. Ballou, Manhasset Mfg. Co., Providence
Harold C. Barnefield, Waypoyset Mfg. Co., Central Falls
Nelson A. Batchelder, B. B. & R. Knight, Inc., Providence
Harris H. Bucklin, Interlaken Mills, Phenix
Arnold B. Chace, Valley Falls Co., Albion
Benjamin C. Chace, Jr., Crown Mfg. Co., Pawtucket
E. G. Chace, Fort Dummer Mills, Providence
Henry C. Dexter, Warwick Lace Works, Central Falls
A. W. Dimick, Grosvenor Dale Co., Providence
Ezra Dixon, Dixon Lubricating Saddle Co., Bristol
Robert Dow, Solway Dyeing & Textile Co., Pawtucket
Frederick E. Fowler, The Westerly Textile Co., Westerly.
N. LeRoy Gardner, R. L. Greene Paper Co., Providence
William H. Gidley, Greene and Daniels, Inc., Pawtucket
R H. I. Goddard, Goddard Bros., 20 South Main St., Providence
George T. Greenhalgh, Burgess Mills, Pawtucket
Frederick Jerome Hoxie, Warwick Mills, Cnterville
Webster Knight, B. B. & R. Knight, Inc., Providence
James R. MacColl, Lorraine Mfg. Co., Pawtucket
Charles R. Makepeace, United Braid and Lace Mfg. Co., Providence
John Warren Manley, 185 Arlington Ave., Providence
Frederick R. Mason, Robert D. Mason Co., Pawtucket
Edward S. McCaughey, Home Bleach & Dye Works, Pawtucket
Charles H. Merriman, Jr., Manville Co., Providence
William B. Orr, Forestdale Mfg. Co., Forestdale
Patrick H. Quinn, Warwick Lace Works, Riverpoint
Charles O. Read, Sayles Finishing Plants, Saylesville
E. R. Richardson, Warwick Lace Mills, Pawtucket
Frank E. Richmond, Crompton Co., Crompton
Frank G. Rowley, Treas., McKenzie McKay Co., Pawtucket
Christopher J. Shambow, Shambow Shuttle Co., Woonsocket
Maurice C. Smith, National India Rubber Co., Bristol
Dexter Stevens, The Esmond Mills, Esmond
S. Willard Thayer, Dexter Yarn Co., Pawtucket
Eugene F. Willey, Nyanza Mills, Woonsocket

Kenneth F. Wood, Sayles Bleacheries, Slater Trust Building, Pawtucket

VERMONT

Edward G. Chace, Fort Dummer Mills, Brattleboro
Manley G. Merrill, Fort Dummer Mills, Brattleboro
Andrew McLean Young, Queen City Cotton Co., Burlington

## American Association Delegates.

ALABAMA

Joseph S. Bradley, Agent Merrimack Mfg. Co., Huntsville
Donald Comer, President Cowikee Mills, Eufaula
George P. Haslam, Treas., Coosa Mfg. Co., Piedmont
T. H. Rennie, President, Pell City Mfg. Co., Pell City
Scott Roberts, Treas., Adelaide Mills, Anniston
C. S. Wilkinson, Agent Dwight Mfg. Co., Alabama City

DELAWARE

M. R. Poucher, Director Dyestuffs Sales Division, E. I. DuPont de Nemours & Co., Wilmington

GEORGIA

Charles Adamson, President Cotton & Export Co., Cedartown
Garnett Andrews, Richmond Hosiery Mills, Rossville
S. Y. Austin, Hillside Cotton Mills, LaGrange
J. M. Brawner, President Kincaid Mfg. Co., Griffin
Cason J. Callaway, Valley Waste Mills, LaGrange
Thomas J. Callaway, Milstead Mfg. Co., Millstead
Roy Dallas, Elm City Cotton Mills, LaGrange
M. J. Daniel, Rushton Cotton Mills, Griffin
Oscar Elsas, President Fulton Bag & Cotton Mills, Atlanta
W. A. Enloe, Jr., Treasurer Union Cotton Mills, LaFayette
Robert C. Freeman, President Dixie Cotton Mills, LaGrange
Frederick B. Gordon, President Columbus Mfg. Co., Columbus
George W. Hamilton, Crown Cotton Mills, Dalton
R. E. Hightower, President Thomaston Cotton Mills, Thomaston
Allen F. Johnson, President Exposition Cotton Mills, Atlanta
George H. Lanier, Vice President Lanett Cotton Mills, West Poinnt
J. A. Mandeville, Mandeville Mills, Carrollton
J. D. Massey, Vice-Pres. Eagle & Phenix Mills, Columbus
J. W. Parker, Treasurer Pelham Mfg. Co., Pelham
John H. Quillian, Mgr., Cedartown Cotton & Export Co., Cedartown
Paul A. Redmond, Agent Aragon Mills, Aragon
George B. Scott, Scottdale Mills, Scottdale
B. T. Thompson, Pres. & Treas. McIntosh Mills, Newnan
M. M. Trotter, Jr., Manager Manchester Cotton Mills, Manchester
C. V. Truitt, President, Elm City Cotton Mills, LaGrange
W. J. Vereen, Treas., Moultrie Cotton Mills, Moultrie
Harry L. Williams, Treasurer, Hamburger Cotton Mills, Columbus
B. L. Willingham, Willingham Cotton Mills, Macon

LOUISIANA

A. K. Landau, Treasurer, Orleans Cotton Mills, New Orleans
W. L. Landau, President, Orleans Cotton Mills, New Orleans
A. W. McLellan, President, Alden Mills, New Orleans
S. Odenheimer, President, Lane Cotton Mills, New Orleans
J. S. Pleasant, Laurel Cotton Mills, Laurel

MARYLAND

Howard Baether, Mt. Vernon-Woodberry Mills Co., Baltimore
Johnson P. Wright, Treas., Rockland Building & Dye Works Co., Brooklandville

MASSASHUSETTS

Albert H. Chamberlain, Treasurer, Arlington Mills, Lawrence

MISSISSIPPI

J. W. Saunders, President & Treasurer, Aponaug Mfg. Co., Koscuisko
T. L. Wainwright, President, Stonewall Cotton Mills, Stonewall
William Warmach, President & Treasurer, Yazoo Yarn Mills, Yazoo City

NEW YORK

E. S. Boteler, G. K. Sheridan & Co., N. Y. C.
Charles C. Copeland, Cannon Mills, 55 Worth St., N. Y. C.
Albert Gregory, Gregory & Banks, 467 Broadway, N. Y. C.
T. H. Haywood, T. H. Haywood Cotton Goods Dep't., 65 Leonard St., N. Y. C.
J. C. Leslie, Cannon Mills, 55 Worth St., N. Y. C.
Edward D. Marsh, Post & Flagg, N. Y. C.
R. E. Reeves, Hunter Ffg. & Commission Co., N. Y.
W. W. Vick, The Manufacturers Agents Co., Inc., 61 Broadway, N. Y. C.
Ridley Watts, Watts-Stebbins Co., 44-46 Leonard St., N. Y. C.

NORTH CAROLINA

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C. B. Armstrong, President, Monarch Cotton Mills, Gastonia
George F. Avinger, Dickson Cotton Mills, Laurinburg
A. H. Bahnson, Pres. & Treas. Arista Mill Co., Winston-Salem
A. L. Baker, President, Virginia Cotton Mills, Swepsonville
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P. L. Borden, Treasurer, Borden Mfg. Co., Goldsboro
F. K. Broadhurst, Treasurer, Ivanhoe Mfg. Co., Smithfield
D. D. Bruton, Francis Cotton Mills, Inc., Biscoe
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O. D. Carpenter, President, Harden Mfg. Co., Worth
J. S. Carr, Jr., Durham Hosiery Mills, Durham
Bernard M. Cone, President, Proximity Mfg. Co., Greensboro
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A. A. McLean, Jr., Treasurer, Atlas Mfg. Co., Bessemer City
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J. F. Moffit, Treasurer, Wennoah Cotton Mills, Lexington
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R. G. Rankin, Pinkney Mills, Inc., Gastonia
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R. S. Reinhardt, President, Elm Grove Mills, Lincolnton
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A. A. Shuford, Treasurer, Ivey Mill Co., Inc., Hickory
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R. L. Stowe, Treasurer, Imperial Yarn Mills, Belmont
S. P. Stowe, Treasurer, Climax Spinning Co., Belmont
S. B. Tanner, Pres. & Treas., Henrietta Mills, Caroleen
J. F. Taylor, President, Kinston Cotton Mills, Kinston
Alfred A. Thompson, Pres. & Treas., Raleigh Cotton Mills, Raleigh
J. W. Weir, High Shoals Co., High Shoals
J. O. White, President, Modena Cotton Mills, Gastonia
James N. Williamson, Jr., James N. Williamson & Sons, Burlington
Lynn B. Williamson, E. M. Holt Plaid Mills, Burlington
J. W. Williamson, Treasurer, Bellwill Cotton Mills, Wimington
William H. Williamson, Pres. & Treas., Pilot Cotton Mills, Raleigh
E. H. Williamson, President, Advance Mfg. Co., St. Pauls

OKLAHOMA

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PENNSYLVANIA

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Martin P. Glynn, Cannon Mills, Philadelphia
J. L. Wilson, James L. Wilson & Co., Philadelphia

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J. W. Arrington, Jr., Treas., Union Bleaching & Finishing Co., Greenville
H. R. Barron, Manchester Cotton Mills, Rock Hill
W. E. Beattie, President Piedmont Mfg. Co., Piedmont
James A. Chapman, Inman Mills, Inman
C. W. Coker, Southern Novelty Co, Hartsville
J. C. Evins, Pres. & Treas., Clifton Mfg. Co., Clifton
W. A. Floyd, Victor-Monaghan Mills, Greenville
B. E. Geer, Judson Mills, Greenville
J. P. Gossett, President, Brogon Mills, Anderson
B. B. Gossett, Treasurer, Brogon Mills, Anderson
A. J. Graham, Treasurer, Camperdown Mills, Greenville
W. S. Griffin, Cooper & Griffin, Greenville
G. W. Grier, Fairmont Mfg. Co., Fairmont
W. M. Hagood, Pres. & Treas., Glenwood Cotton Mills, Easley
James D. Hammett, President, Chiquola Mfg. Co., Honea Path
W. C. Hamrick, Broad River Mills, Gaffney
H. B. Jennings, Union Buffalo Mills Co., Union
D. L. Jennings, President, Beaumont Mfg. Co., Spartanburg
John A. Law, Saxon Mills, Spartanburg
Robert E. Ligon, Equinox Mill, Anderson
W. E. Lindsey, D. E. Converse Co., Glendale
Alexander Long, Baldwin Mills, Chester
J. F. MacEnroe, Ware Shoals Mfg. Co., Ware Shoals
S. H. McGee, Panola Cotton Mills, Greenwood
Robert S. McBane, President, Republic Cotton Mills, Great Falls
Ben W. Montgomery, President, Drayton Mills, Spartanburg
V. M. Montgomery, Gainesville Cotton Mills, Spartanburg

W. S. Montgomery, President, Spartan Mills, Spartanburg
W. B. Moore, Travora Cotton Mills, York
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Emslie Nicholson, Treasurer, Monarch Mills, Union
F. W. Poe, F. W. Poe Mfg. Co., Greenville
August W. Smith, Brandon Mills, Greenville
Harold C. Smith, Watts Mills, Laurens
Ellison A. Smyth, Pelzer Mfg. Co., Greenville
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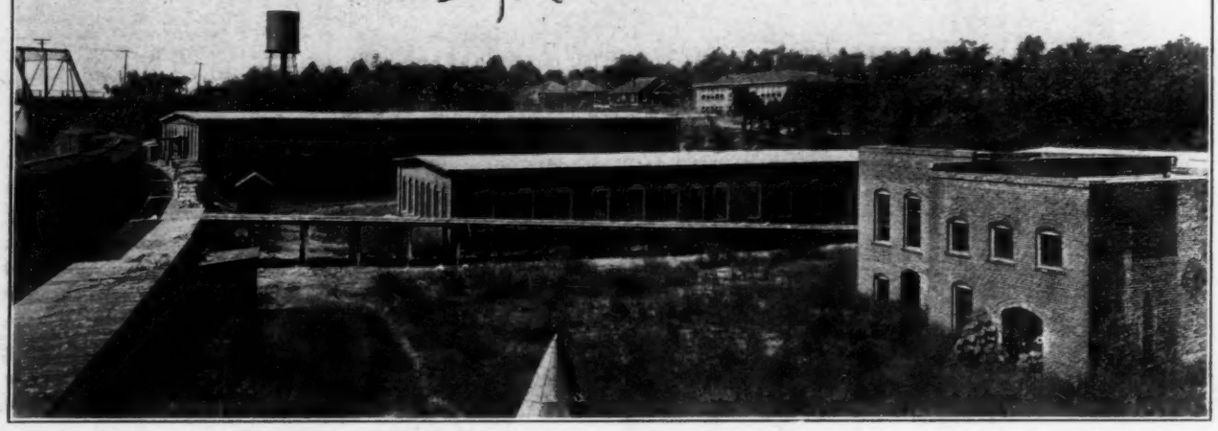
(*Continued on page* 831.)

# Atlanta as a Cotton Waste Center.

## By Robert Hecht.*



THE PLANT OF THE INTERNATIONAL COTTON PRODUCTS CO.

It is of interest to the manufacturing industry to know that within the last few years Atlanta has gained a foremost place among the cotton waste centers of the world. About five years ago there was hardly any business transacted in cotton waste in this city, and a few thousand dollars would have covered all the dealings at that time.

Making a conservative estimate, there is today being handled by dealers and waste plants in Atlanta approximately ten million dollars' worth of cotton waste, which means that about one-fourth of the entire cotton waste of the United States passes one way or another through the hands of Atlanta people.

Furthermore, within a radius of one hundred miles, three plants are handling and utilizing approximately another eight to ten million dollars' worth of cotton waste. Therefore, it can be safely said that half the production of cotton waste of the United States is handled in Atlanta and its immediate vicinity.

Prior to this time the waste market was controlled and dictated by three centers in the world, and southern spinners had to submit to whatever these centers were pleased to allow them for their mill waste. The principal market of the world was Manchester, for the English waste; next came Boston, Mass., for the American waste. The consuming centers were mostly countries on the Continent of Europe, such as Germany, Belgium and Austria.

It was a condition similar to that formerly found in the oil mill industry where it took quite a long time to find suitable outlets for the cotton seed products and by-products. In fact the cotton seed was for a long time thrown away or piled behind the gin, thus forming a nuisance. Finally, the oil mill industry was started and then the fiber product, the linters, became a nuisance because no market was to be had. Europe, however, soon found a market for linters, and it is a well-known fact that over half the linter crop went to Europe before the war, for spinning and munition purposes and the price was dictated by European buyers and foreign exporters.

Now, however, the condition is changed, and the price is not dictated by Europe, as linters are used in the United States to such an extent that the American consumers are fixing the price. I refer to this in order to draw attention to the movement in this country to utilize American cotton waste by building special plants in connection with the big mills to convert their own waste into finished products such as towels, finished yarns, ropes, twine, felt batting, absorbent cotton and other useful material which formerly was principally made of cotton or linters.

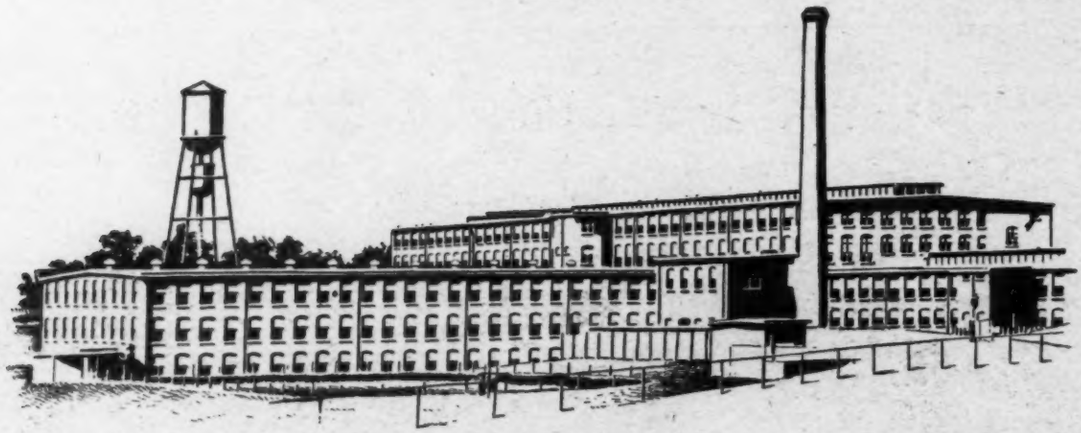
Prominent mill men went to Europe to carefully study conditions in the waste trade and have built and are building mills on similar lines to those established in the "Old Country," adding to this American labor-saving devices and effectiveness. It is especially the South which has adapted itself to the better consumption of the waste and as stated millions of dollars' worth of waste is utilized in Atlanta and nearby territory.

Expensive plants, equipped with the most modern machinery produced here and abroad, in addition to all labor-saving devices, have been erected to clean and assort the waste. One of the oldest and best known plants is located in Augusta, Ga. Then there is the Valley Waste Mills, the wonderful plant of the Callaway interests in LaGrange, and a jewel all its own is the waste plant of the Lanier interests at Fairfax, Ala., known as the West Point Utilization Company. A good deal of the waste produced in these plants, and not used in their own manufacturing, is sold through the cotton waste interests of Atlanta.

While in recent years, especially in the high-grade waste such as comber noils and strips, it was an established saying that Boston is selling at such and such a price and we have to sell cheaper, we are coming to the point where the South is selling at such and such a price, and Boston regulates itself accordingly.

It appears that there is a slow movement all over the world in the manufacturing centers of different grades of

*Vice-President and Treasurer International Cotton Products Co., Atlanta, Ga.



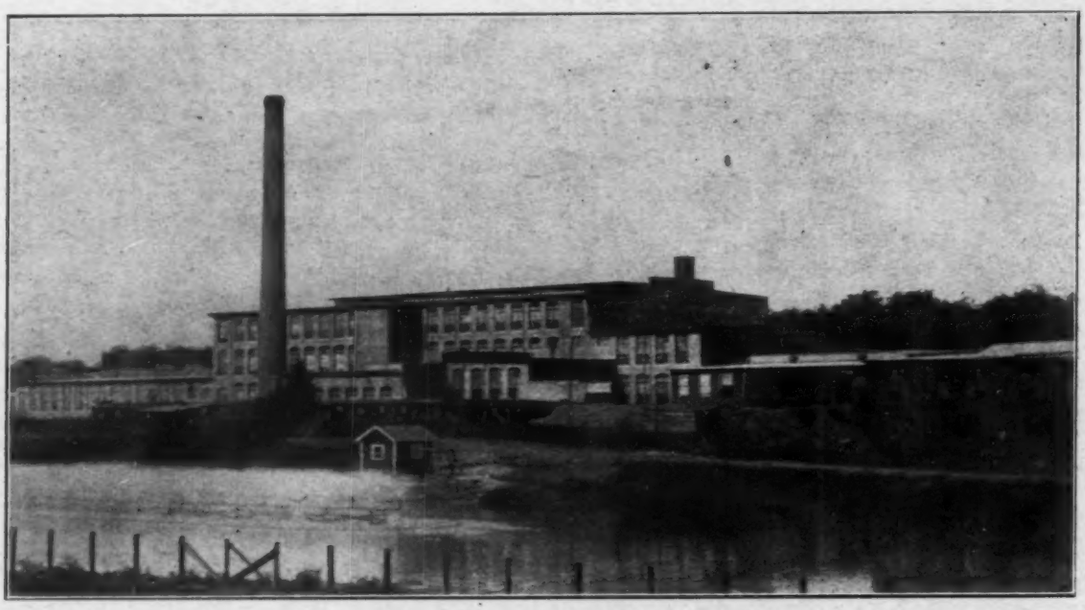
The West Point Utilization Company.

cotton goods. Formerly, England made the fine yarn goods, but it is slowly but surely turning the bulk of that industry over to the New England centers. The New England centers, which used to make medium and fairly fine numbers of yarns, are now making mostly fine yarns, and the production of the first mentioned grade has moved southward, while the spinning of coarse yarns, which was a specialty of the South, is moving toward the Far East to Japan and China. This has a great meaning for the waste business. It means the grades of waste formerly supplied in the North on account of the manufacture of certain goods, are now made in the South; and where before the war, Europe had to come to Boston for certain grades of waste, on account of this movement in the production of waste, they now have to come to "Dixie" to get it from southern mills.

There accrues to the South a triple benefit in its cotton waste trade. First, in the establishment of waste spinning mills which consume their own waste at home. Second, in the stabilization of prices in this section by reason of its commanding its own markets. And, third, and the greatest benefit derived is the direct export of waste from the South to foreign waste consumers.

In order to compete with southern waste dealers and utilization plants, a great many northern firms are compelled to open offices in the South and do their banking in the South on account of the peculiar terms on which waste is handled in this section.

The several consumers of waste which have sprung up in the South within the last five years have had the glad hand of welcome from the southern cotton mills, which are able to sell to them on a cash basis, while northern mills are still at a disadvantage, having to extend credit to the waste dealers, and in case of market fluctuations, having to stand a good many reclamations and other difficulties. Also it is but natural for the southern manufacturer to give this preference in selling a product, which varies so in grade, to a southern man on the spot who can see it as it runs, rather than take a chance on a technicality and deal with a man hundreds of miles distant.



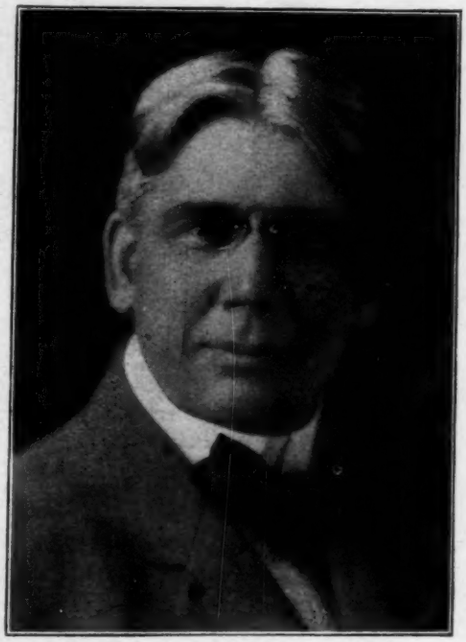
The Valley Waste Mills.

In the next few years I will venture to predict that the South will be supreme in cotton waste, and there is the hope that Atlanta, as the cotton waste center, will control its market and give fair returns to the mills for the product which is now called "Waste," but which name should be changed to "By-Product," because the time has passed where anything in this world should be wasted or should be called waste, if it can be utilized for any beneficial purpose.

# Union Cotton Warehouse Corporation Plans

It is confidently expected that, when another season's cotton crop is ready to be harvested, a goodly number of the standard warehouses of the Union Cotton Warehouse Corporation will be ready to receive a large portion of it. The corporation plans to purchase or erect storage warehouses of an initial capacity of but 1,200,000 bales in a section of the cotton belt that annually produces something like 8,500,000 bales. It plans, however, to purchase sufficient land, and to so construct its warehouses in 10,000 bale "units", that their capacity may be doubled on short notice, and added to indefinitely, as occasion demands.

Announcement has already been made of the tentative selection of cities where the Corporation will purchase or build its plants, and of the initial capacities for storage that will be provided. These include four points in Texas, two in Louisiana, one each in Arkansas, Illinois, Tennessee and Mississippi, six in Alabama, eight in Georgia, five in South Carolina, three in North Carolina, and one in Virginia. New England, also, will be provided with storage facilities by the location of a big warehouse at some central railroad junction and rate making point, as Mansfield or Framingham, Massachusetts, and by locating smaller warehouses nearer the consuming cities on tide water, as at Fall River, New Bedford and Providence.



Rufus R. Wilson.

Much study, too, has been made of the cotton storage situation as it exists in the harbor of New York. Although there are no cotton mills in the metropolitan district and few nearby, there has always been in the past a large quantity of the staple stored in that section, larger by far than at many of the southern points tentatively selected. This cotton is stored to meet the demands of the local spot market. It is held, also, en route for export, and in transit to New Jersey and New York up-state mills. With the high cost of suitable water-front property for the erection of warehouses, the engineers of the corporation have not yet determined whether or not it will be good business to enter the New York warehouse field. Instead Albany, New York, is under consideration as a warehouse site. This is a railroad rate making point, convenient to many mills in both New York State and in New England, and is on tidewater.

Definite arrangements have been made and the terms arrived at for the construction of plants at many strategic points in the South. These will include plants at some Texas coast city, as Galveston, Texas City or Houston, yet to be determined, and at Augusta, Savannah, Spartanburg, Raleigh, Macon and Montgomery. Negotiations are also well under way with owners for the taking over of existing plants at Memphis, Greenville, Norfolk, Mobile, Birmingham and other important centers. The final report of the engineers and of the financial advisors of the corporation will be ready some time in October.

Although the plans of the warehouse corporation contemplate operating plants only at important central or concentration points it must not be considered that the movement will in any way conflict with smaller warehouses of the cotton farmer located or projected at interior ginning points. The farmers' warehouse will feed into the southern warehouses of the Union Warehouse Corporation just as the southern warehouses of that corporation feed into those located at northern centers.

The Union Warehouse Corporation must rely upon the southern producer of cotton to use a large per cent of the storage facilities it proposes to purchase or construct. The storage facilities planned for New England and the North are considered sufficient to meet the demands of the spinners for their reserve needs, and they will in turn rely upon the cotton stored by the producer in Union warehouses in the South to meet their demands as the season progresses after the crop has been harvested. The corporation, however, will plan to leave 75 or 80 per cent of its facilities where location permits open to the southern producer until some reasonable time, say in January or February, when it is expected that all of the season's crop will be warehoused, after which time its facilities will be open to the general market including, of course, the exporter and the northern spinner.

The guiding spirit in the warehousing movement that has been under such intensive study and investigation for the past two years is Rufus R. Wilson, secretary of the National Association of Cotton Manufacturers, who will head the Union Warehouse Corporation, when formed, as its president. In his work, Mr. Wilson has been assisted by a corps of trained experts in the various fields of endeavor involved, experts in all branches of the cotton industry both from the South and the North from the grower to the spinner, including the spinner of foreign lands. Engineers and financial advisors, too, have been upon Mr. Wilson's staff. The result has been that a well considered, carefully rounded out plan has been devised to meet the exigencies of the situation from all angles.

Early in the development of plans it was seen that it would be necessary to secure the active cooperation of some well-known investment banking house in order to insure the underwriting of the securities of the corporation when ready. This was done and every move has been made with the advice and consent of the banking house selected, so that, with the receipt of formal reports from the experts, the underwriting of the project will be assured.

Early in the development it was also seen by Mr. Wilson that the engineering features of the enterprise should be in the hands, not only of a firm competent by experience to handle the details of construction, but one whose report would be satisfactory to the underwriting banking house selected. With this end in view, Monks & Johnson of Boston were selected.

It was early seen that a competent financial advisor would be a necessary factor in guiding the movements of the corporation, and Guy P. Billon of New York City was appointed to act in such capacity. Mr. Billon has made frequent trips through the South, and has brought to a conclusion most of the arrangements as to terms by which the corporation will take over existing warehousing plants.

### Standard Warehouses Planned.

The warehouses are to be of a standard design, of concrete-steel construction, fire-proof throughout. They will be built not only on the 10,000 bale unit system previously described which will provide for future expansion, but upon the unit system, as well, of detailed construction whereby each slab of reinforced concrete entering into the construction will be a standard, moulded and built up in an assembling yard. Each pillar, curtain wall, window frame, door jamb or floor beam will be as applicable to, and will fit as closely into the place designed for it in a warehouse in Mansfield, Massachusetts, as at Galveston, Texas. The existing warehouses to be taken over will be remodeled so as to conform, as nearly as possible, to this plan of construction.

Notwithstanding the almost perfect fire-proof character of the construction contemplated, all of the warehouses will be equipped with standard sprinkler systems of the most approved type, thus assuring the minimum rate of insurance. The difference between insurance rates on buildings and on cotton stored in adequately or inadequately protected warehouses is too apparent to be ignored. A rate as high as $2.57 per $100 is sometimes insisted upon by the insurance underwriters on cotton stored in buildings of antiquated design and improperly protected against fire.

On the other hand, an insurance rate as low as 10 cents or 12 cents per $100 is obtainable on cotton stored in properly constructed and adequately protected warehouses, such as are contemplated by this corporation. Not only in the sprinkling feature, but in all construction features as well, are the rules and specifications of the insurance underwriters being followed in the design of the warehouses. Special attention is also being paid to economy and convenience of reaching any specified bale or lot of bales that may be desired to be removed. With this end in view mechanical efficiency devices will be installed to meet the requirements.

In August, 1916, Congress passed what is known as the United States Warehouse Act. It is under the provisions of this Act that the Union Warehouse Corporation proposes to operate its chain of warehouses. Under it private persons, firms and corporations may form themselves into warehouse companies to receive agricultural commodities in bond. The warehouses are subject to the direct supervision of the Department of Agriculture. Before a license is granted to a company to do business as a warehouseman under the Act an adequate bond must be filed with the Department and thorough examinations are also to be made by the Department. Being under rigid government supervision the negotiable bonded warehouse receipts for cotton in store, given by a warehouseman so created, guaranteeing weight, at once become the highest class of security for money loaned, and the loaning parties have the actual physical possession of the property, stored in a place of safety under the supervision of the Department of Agriculture. Add to this the stability gained by the operation of the recently enacted Federal Bill of Lading Act, which defines and limits the responsibility of ocean carriers of goods while in transit, and ideal cotton handling condition will have been obtained.

Under the financial plan adopted a preliminary organization has been affected called the Union Cotton Warehouse Organization Corporation of which Mr. Wilson is president. This was done because it was realized, from the start, that a vast amount of preliminary work, costing substantial amounts of money, must be done in order to determine first, whether or not it was going to be policy to proceed further than preliminaries, and second, if so, how to proceed so as to assure success both from a physical and financial standpoint. It is this organization company, capitalized for $200,000, that has been conducting the investigations referred to. It is the organization company that will continue the work till final underwriting agreements have been obtained by it for the sale of securities for purchase of existing plants, and the construction of new ones. The stock of the organization company has been widely distributed among a very large number of men, all interested in cotton or in warehousing from one angle or another, and all interested in the success of cotton warehousing both in practice and principle.

It is expected that, early in November, sufficient progress will have been made so that the organization company may cause the Union Cotton Warehouse Corporation to be incorporated. This will be done on substantially the following lines:

The common shares will have no par value. The preferred shares will have a par value of $100 each, in amount $10,000,000. There will be authorized an issue of 6 per cent, sinking fund, gold bonds amounting to $20,000,000. These bonds will be issued only for actual property purchased or plants constructed and at a rate of 60 per cent of the appraised value thereof.

In financing the purchase of properties, arrangements are being made with the owners thereof to take in payment 60 per cent of the appraised value in the bonds of the corporation and the balance in preferred stock and cash. That portion of the preferred stock not so disposed of will be financed through the sale of one half of the issue to the public through the underwriters, the other half to be taken by the various cotton interests that will derive benefit through use of the warehouses.

Cotton warehousing and cotton financing go hand in hand. Indeed, the two phases of the industry cannot well be separated. With this view in mind it is the purpose of the Union Cotton Warehouse Organization Corporation, as soon as work upon the warehousing is ready for presentation to underwriters of the securities, to immediately organize the Union Discount Corporation. This corporation will be created for the purpose of buying and selling cotton acceptance paper, thus creating a broad market for paper whose market, under present conditions, is restricted to the locality where it originates. It is proposed to distribute the stock of the Discount Corporation widely among the banking interests, in the cotton belt, and in the North.

Under the dual system of warehousing and financing

(*Continued on page* 823.)

# Designs for Fancy Cotton Fabrics

BY T. WOODHOUSE AND J. IRELAND.

PART FORTY-FIVE.

The cloth illustrated in Fig. 200 is a good example of a stripe pattern since it embodies not only differently-colored threads in the warp but various types of weave structure. The fundamental feature of the pattern consists of alternate bands of 3 up 3 down twill to right and 2 up 2 down warp rib. These sections, distinct in themselves, are further emphasized by the addition of a pair of black threads between each pair of stripes. Two such stripes constitute the complete pattern so far as width is concerned.

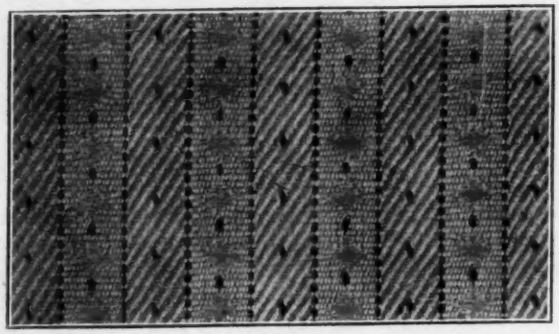


Fig. 200.

hence there are approximately 4½ repeats of the pattern in the illustration.

At regular intervals on the warp rib stripe appears a diamond figure developed by the filling, while small black spots formed by a pair of black threads alternate with these figures in the direction of the warp and in the center of the stripe. A similar pair of black threads are used for the centre of the 3 up 3 down twill stripe but the black spots formed by these threads are in a different horizontal plane to those in the adjoining stripe; the small black spots are indeed arranged amongst themselves in diamond order, or in what is often termed a "drop" pattern.

One complete unit of the design on 68 threads and 36 picks is illustrated at C, Fig. 201. It will be seen that both stripes are the same width, each occupying 30 white threads and 2 black threads which form the junction between each pair of main bands of the design. All the black threads are represented on the design in Fig. 201 in solid black marks, whereas all the white threads are shown in crosses.

In that section which contains the 3 up 3 down twill, the first and last threads, i. e., the 2nd and 33rd threads of the design C, Fig. 201, do not really form a continuation of the twill, but are made to "cut," as it is technically termed,

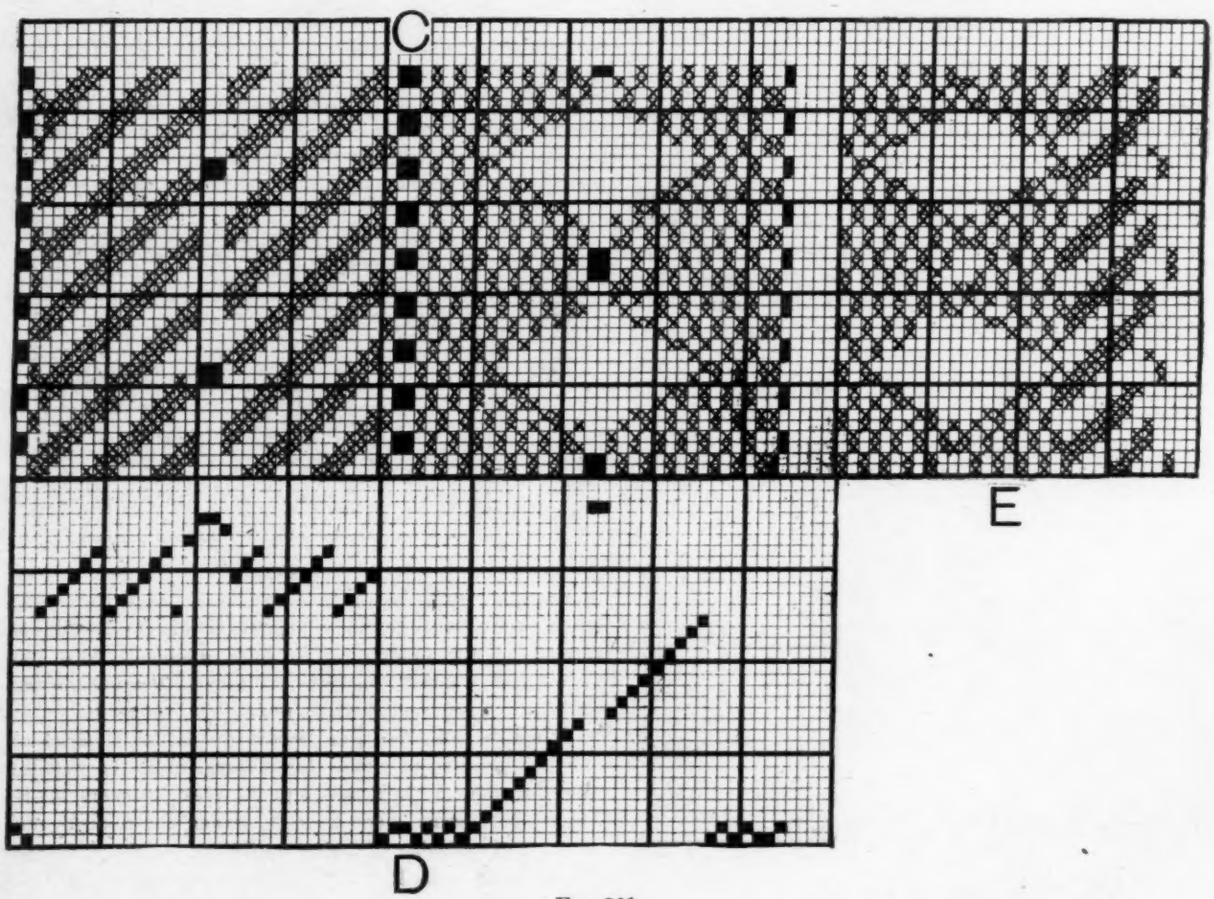



Fig. 201.

with the adjoining black threads for the purpose of showing up the latter to advantage. The same remark applies to those threads on both sides of the spots.

At first sight it would appear as if there were two repeats of the design in the way of filling; this, however, is not the case, for it will be seen that although the 3 up 3 down twill repeats three times in 18 picks, the 2 up 2 down basket contains 4½ repeats in 18 picks; as a consequence, it is necessary to extend the design to 36 picks in order that the two weaves, as well as the large diamond patterns, may have complete units on the same pick. Thus, 36 is the least common multiple of the three units on 4, 6 and 18 picks, respectively.

There is some little irregularity in the outline of the filling diamond, but this is generally the case when basket weaves or warp rib weaves are employed for developing the ground structure.

The draft for the design is exhibited at D from which it will be seen that 30 harnesses are required, and if this particular draft were used, the weaving plan would be that

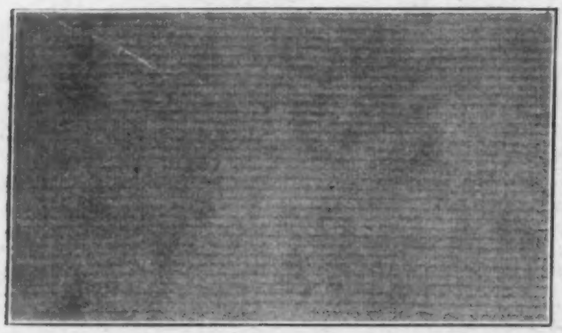


FIG. 202.

represented at E. In the finished state the cloth contains 110 threads per inch and 68 picks per inch.

The cloth illustrated at Fig. 202 is typical of a popular range of pique patterns, and is a very fine texture. The yarns of this cloth are all white, but there are three different counts employed. There are two distinct sets of warp and filling, and the fabric is of the double cloth type. The warp and filling of the face cloth are of fine counts, i. e., small yarns, the warp of the back cloth is of medium count, while the filling of the back cloth is of a low count, and therefore comparatively coarse. The arrangements of the yarns are as follows:

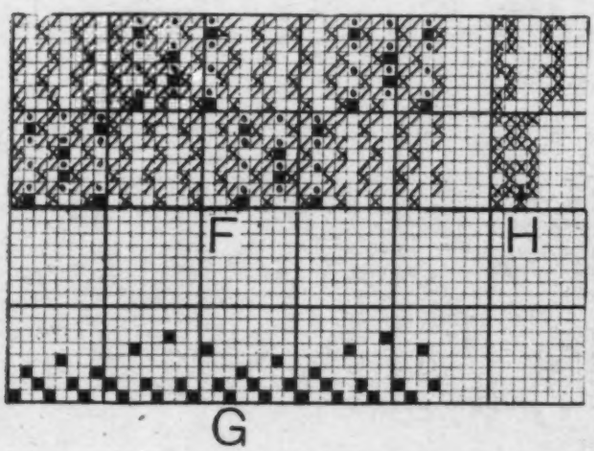



FIG. 203.

Warp: One thread fine yarn for face cloth; one thread medium yarn for back cloth; one thread fine yarn for face cloth; equivalent to two of face to one of back.

Filling: One pick fine yarn for face cloth; one pick coarse yarn for back cloth; 120 face threads per inch finished; 60 back threads per inch finished; which is equal to 180 threads per inch.

128 face picks per inch finished and 128 back picks per inch finished are equal to 256 picks per inch.

Two repeats of the design in the way of the warp, and one repeat in the way of the filling are shown at Fig. 203. The marks of this design have the following significance: Crosses represent face threads on face picks; Dots repre-

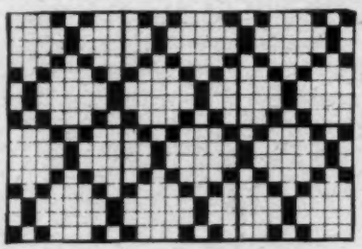


FIG. 204.

sent ground threads on ground picks; Diagonals represent face threads lifted on ground picks; solid squares represent ground threads lifted over face picks.

It will be seen that the face threads and picks are weaving in perfectly plain order with each other, and that the ground threads and picks are interlaced with each other in the 4 up 4 down basket order. The design marks indicate how these two distinct cloths are kept separate where desired; indeed but for the effect produced by lifting the ground threads over face picks as indicated by the solid marks in the design, the structure would result in two entirely separate cloths. It is necessary in all compound cloths to bind the two otherwise distinct structures together, and in this particular case the solid marks on that design

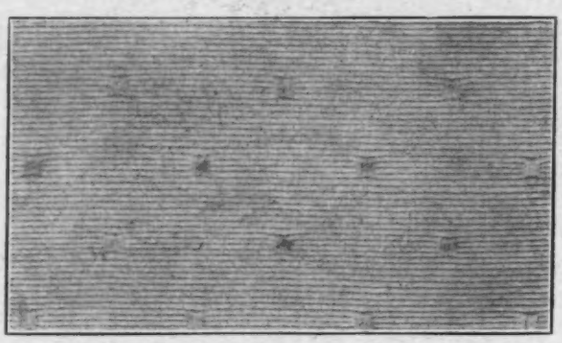


FIG. 205.

represent the order of binding, and under the existing conditions it happens that the characteristic diamond outline is formed by the binding. The little diamonds form the upper part of small "pockets" or "purses" because the two cloths are separate at these points.

It will be observed from the draft at G that 6 harnesses only are required to weave this pattern, while the weaving plan for these 6 harnesses and 16 picks appears at H. The binding weave alone is on 6 threads and 8 picks, and as shown is capable of being drafted on 4 leaves, (leaves 3 to 6 inclusive in Fig. 203). Eight repeats of this binding weave are displayed in Fig. 204.

Fig. 205 represents an entirely different kind of pique. In this example the yarns are again all bleached white with two different counts for the warp and two for the filling. The arrangements of the yarns are as follows:

Warp: One thread fine yarn for face cloth; one thread coarse yarn for ground cloth; one thread fine yarn for face cloth; or again equal to two threads of face yarn to one thread of ground yarn. 92 face threads per inch, 46 ground threads per inch, which is equal to 138 threads per inch.

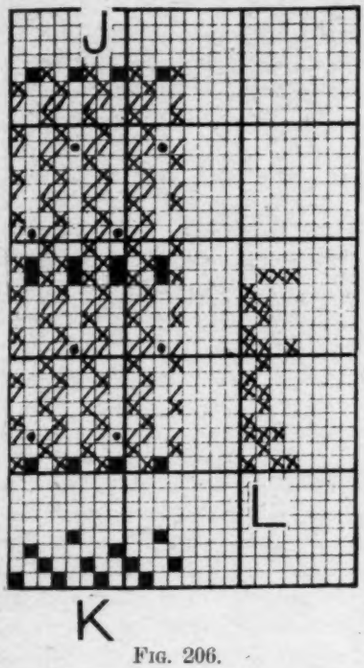


FIG. 206.

Filling: One pick fine yarn for face cloth; one pick coarse yarn for ground cloth, continuing for 12 picks. Then 2 picks fine yarn for face cloth, which is 215 face picks per inch and 86 ground picks per inch or equal to 301 picks per inch.

Four repeats of the point paper design, two each way, are given at J, Fig. 206, so that the unit design is on 6 threads and 14 picks. The various marks on this design have the same significance as those in Fig. 203. It will therefore be seen that the face threads and picks again weave in 1 up 1 down plain order as indicated by the crosses. The dots show where the ground threads are lifted over the ground picks, and that this operation occurs only on alternate ground picks. The remaining ground picks, i. e., the horizontal lines of small squares, Nos. 6 and 12, and also

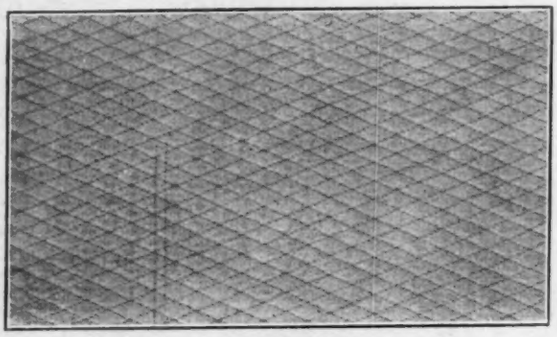


FIG. 207.

20 and 26, do not interweave with either the face or ground threads, but simply occupy a position between the two cloths and thus act as padding or stuffing picks. The position of these picks is immediately under the rib of the cloth. The furrow between the ribs is obtained by bringing all the back threads over two successive face picks; this section is indicated on the design by solid marks on picks 1, 14, 15 and 28. The draft at K shows that only four harnesses are required, and with this draft the weaving plan would be that illustrated at L.

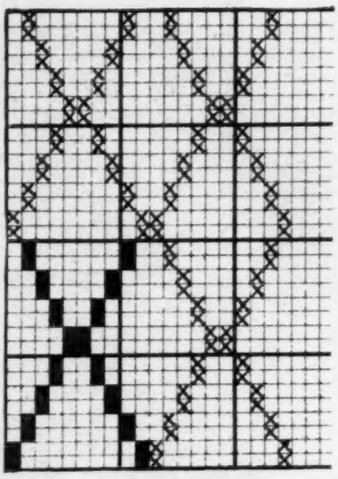


FIG. 208.

The cloth reproduced in Fig. 207 is also a very good illustration of the production of figures by the principle of stitching or interweaving the threads from a ground cloth with the picks of a face cloth of the double textures even although the face cloth of the compound structure is perfectly plain. The two sets of diagonal lines from left to right and from right to left, forming by their intersections the diamond figures, indicate where this stitching occurs to break up the otherwise flat surface due to the plain weave. Fig. 208 illustrates four repeats of the skeleton stitching weave, the unit weave appearing in solid marks.

The diamond figures in Fig. 207 are wider horizontally than vertically, whereas the opposite is the case in the

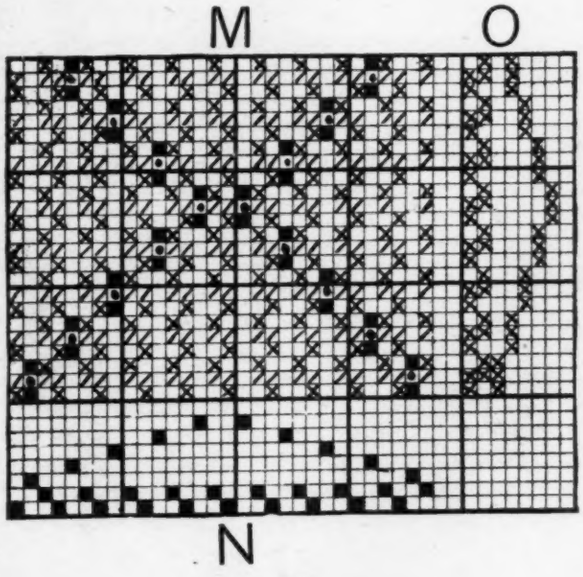


FIG. 209.

corresponding design in Fig. 208. This change in the effect is due to the disposition of the yarns and to the relative numbers of threads and picks in Fig. 207.

The skeleton design, i. e., the stitching marks in Fig. 208, are reproduced in their proper places in Fig. 209, where M represents one complete unit on 30 threads and 24 picks. The warping and filling particulars are both equivalent to two threads of face and one of ground. The crosses show that the face threads and picks interweave in 1 up 1 down plain order, and the dots show where the ground threads are lifted over the ground picks, and although these occur singly at any particular place, it will be noticed that the same thread is lifted on both the preceding and succeeding picks, or over three successive picks.

(*Continued on page* 823.)

# The Manufacture of Domets

BY WILLIAM B. NANSON.

## Spinning Colored Cottons.

The principle to be observed in the spinning of colored stock into yarn is short "drafts and few of them" with plenty of doubling. For this reason I advocate a system of double carding and the elimination of the drawing and slubbing frames, or, in other words—the adoption of what is known as the "preparatory" system of spinning yarns. This is especially necessary where the yarn is to be used for warps with its extra twist and consequently greater strength required. For filling, if the numbers to be spun are very coarse, say from 2s to 6s, the "condenser" system may be used, but it is hardly advisable to utilize the condenser system for yarns to be made into domets. For cottonades and other coarse goods not intended to be napped, however, the condenser system presents many advantageous features.

In regard to domets, or flannelettes, as they are sometimes called, it depends entirely upon the organization or make of the fabric as to what the finish will be like, as there is little that the napper can do to obtain a fine close finish if the goods are poorly or improperly constructed or to change a poor cloth into a good one, though much may be done to improve it. To obtain a fine soft nap, it is necessary, if the domets are to be napped on one side only, that the filling should consist of loosely twisted yarn, mule spun yarn preferably, and if the cloth is to be napped on both sides the warp must not have too much twist in it. Both of the warp and the filling should contribute their quota to the formation of the naps, for if it has to all come out of one then the cloth will be weakened and the nap thin and scanty.

The prevalent idea is that the filling may be of inferior quality with all kinds of waste mixed into it, and must necessarily be coarse, but this is quite a wrong idea. Of course, spinners desire to, and must use up the waste they make, as far as they possibly can, but it cannot be used up into the finer counts and only into the coarser ones and is quite objectionable as a filling for domets because a full dense nap can not possibly be gotten out of a coarse filling mixed with waste, for, no matter how carefully the napping may be done and how sharp the carding rollers may be kept, the cotton fibers will be pulled off instead of forming a pile.

For the spinning of colored cotton for domets and other goods for napping, we advise a preparatory system composed of the ordinary revolving top flat cards and intermediate roving frames. The revolving top flat card, in this case, has a fancy roller attached, as in woolen carding. The fancy roller is a roller usually put over the doffer, though it may be put almost anywhere. It overruns the periphery of the cylinder, going about one sixth faster, and its object is to prevent the cylinder from filling up with the fiber and loading. No card can do good work when the main cylinder is loaded between the wire, and the fancy roller, by running at a greater surface velocity than the cylinder, lifts the stock from it and prevents it from getting wedged into the wire. A revolving top flat card when fitted with a fancy roller may be sometimes run a whole week without stripping and this is some desideratum when carding expensive colored stock.

It is the writer's opinion, based upon actual experience, that the salient features of the successful spinning of colored cotton are the double carding and the elimination of the drawing processes and the slubbing frame. I would say, however, that I have also achieved good results, especially for filling, with a single carding process, where the card has been fitted up with a fancy roller and a doffer, producing four 30 grain slivers into four coiler cans and no drawing or slubbing.

For double carding colored cotton I would use a breaker card, and a lap winder to take the slivers from the breaker card and prepare them for the finisher card by doubling them 42 into 1 and winding them into a 20 inch lap; and a finisher card doubling four of these 42 sliver laps, or 168 breaker card slivers, into 1, producing four finished slivers of about 20 grains per yard each. In this way we secure a great uniformity and strength with little drawing but we get a large amount of doubling which is what we want.

I would advise the regular revolving flat card with a fancy roller for a breaker card, carding about 1,000 pounds per week of 70 grain sliver from a 14 ounce lap, indicating a draft of 87.5 on the card. This sliver is run into a can on a coiler. 42 cans of this sliver are then taken to the lap winder and formed into a lap 20 inches wide. This lap winder has a slight draft of 25 per cent and the machine is furnished with a stop motion similar to that on the drawing frame, to take care of broken ends. Two of these 20 inch laps are skewered together end to end, making a lap of 40 inches wide and weighing about 10 ounces to the yard; and two of these 40 inch laps are put up tandem on the lap brackets of the finisher card, making an aggregate of 168 slivers, each weighing 70 grains to the yard, from the breaker card and expressing a total weight of lap of 20 ounces per yard fed to the finisher card.

This lap winder has a capacity of 2,500 pounds of lap daily.

I would also advise the regular revolving top flatcard, fitted with a fancy roller, for the finishing card, but with the addition of a four coiler front and a tandem lap bracket so arranged that we can run two 40 inch laps from the lap winder in front of each other on the feeding apron. This feed will weigh 8,820 grains per yard, or about 20 ounces, and this, with a draft of 110 on the card, will give us a web of fiber coming from the doffer comb weighing about 80 grains per yard. This web, however, is divided by a steel bar fitted with thin blades, that is set between the cylinder and the doffer just above their point of contact. These blades divide the web into four equal parts, into four slivers of 20 grains each per yard, and each 20 grain sliver is coiled respectively into its own can.

The coiler head on the finisher card may be of the same type as those on the drawing frame, except that it is made for four cans, nine inches in diameter and 30 inches in height. Much heavier sliver (or lighter) can be made on the card if desired and it may be divided into 1, 2, 3, or 4 slivers if the carder so desires it.

The cans of sliver from the finisher card should be taken direct to the intermediate roving frame, which should be fitted with take-up rolls and a stop motion similar to

a regular slubber. The draft on the intermediate frame should not be over 4 to 1. Therefore, if we put up a card sliver of 20 grains per yard, or, 4.01 hank with a draft of 4 we shall produce a 1.60 hank roving on the intermediate. This, in turn, put up single on a ring spinning frame with a draft of 7 will make a yarn numbering 11.20. If finer yarns are wanted, however, I would advise a second process of roving so as to avoid longer drafts on the spinning frame. For instance, 1.60 hank roving from the intermediate, run double on a 7 x 3½ roving frame with a draft of 4 would make a 3.20 hank roving. This, in its turn, put up single on a ring spinning frame with a draft of 5 would make a good 16s yarn and might, no doubt, in most cases be drawn a little more than this, perhaps to 20s for filling spun on the mule, which it should be when possible. These drafts may be considerably extended.

In the old country the roller card is the favorite card used for carding colored cottons, the sliver being taken direct from the card to an intermediate and from the latter to the ring frame or the mule for warp spun yarns, while for filling yarns, the slivers are carded onto condenser spools on the cards, which condenser spools are put up on the mule and spun directly into yarn and onto filling cops without any drawing, slubbing, roving frames or other frills. It is a good scheme and could be used advantageously here in many places. It is well understood abroad that the success of colored cotton spinning depends upon the elimination of the drawing frame and the use of minimum drafts on the intermediates and in the spinning process and plenty of doublings. In spinning filling by the condenser system, it may be said in passing there is no roller drafting at all.

The doublings heretofore obtained on the drawing frame are secured at the back of the finisher card where 168 slivers from the breaker cards are doubled into one. It may be also considered as certain that by the use of an intermediate roving frame having short drafts, in combination with a ring spinning frame, there is obtained a more even yarn than can be made when the sliver is taken direct from a set of roller cards to a mule fitted for spinning colored stock.

I might add in this connection that all cotton mills making coarse yarns up to No. 14s out of colored cotton may find it a good thing to make even their white yarns by this same process, as it will make stronger yarn with less waste. Colored cotton is difficult to handle and I know of nothing that would give a carder more relief and satisfaction than the elimination of all drawing processes.

Colored cotton in a fleecy state becomes so inflated by air currents and electricity that the fibers are divided on the drawing heads, causing them to spread out and separate. They lose their affinity for each other, so to speak, and stick to everything, they seem even to repel each other, will not remain together compactly and refuse to enter the cans in a fit condition to be drawn out again without waste or injury to themselves. It seems as though some atmospheric conditions tend to release the short fibers, or rather prevent them from combining with the longer ones, so that it has been found to be of advantage to take the sliver direct from the card to the intermediate roving frame and avoid the trouble and expense of drawing, which, under the circumstances, is of no possible benefit.

On the intermediate, when properly fitted for running this colored stock, we can draw the ends more easily out of the cans, moreover, we cannot make "single" and we get a clean bite with little twist.

There are many reasons why I would prefer to carry the card sliver direct to the intermediate when preparing colored cotton for spinning. For one thing, colored cotton yarns, when prepared in this manner, are much stronger, for the reason that the drawing, when practiced, has a tendency to weaken them by polishing the fibers smooth, thus wearing off the beard and causing them to lose their cohesion and slide by each other and pull easily apart when spun. Moreover, colored cotton yarn, when prepared with a minimum of drawing, is not only stronger, but it is fuller and more elastic and has a more wooly feel and takes up more space and makes an ideal filling yarn for cottonades and domets and similar goods where a thick, wooly and substantial feel is required.

In regard to ginghams or shirtings or other goods that are usually starched and finished more or less heavily, this fullness is not at all objectionable because it enables the goods to absorb and hold the size better. There are, however, a few points about the spinning of colored cotton which present objectionable features and difficulties little understood by the average spinner and which require close observation and careful consideration if he wishes to keep out of trouble.

For the first thing, let him remember that twist alters the shade of the color; usually more twist makes the shade darker. This should impress the spinners with the importance of always using the same twist gear and speeds when making the same number and shade of yarn.

I once knew of a spinner making a black and white mock twist for filling blue denims who took out a few turns of twist every time he found himself getting behind in his filling, and the superintendent of that mill does not know to this day why his blue denims were so badly shaded at times. Slack spindle bands or any other cause of twist variation have their corresponding effects on the shade of the yarn and all these points require watchfulness on the part of the spinner.

Again, if common salt has been used in the dyeing of the stock—and which is called by the dyestuff men a mordant, though it is nothing at all of the sort, it being used merely to retard or reduce the solubility or affinity of the water for the dyestuff—the cotton will be sticky, especially in damp weather, and draw badly, entailing a wider setting of the rollers which is not conducive to good work if carried too far. Then, again, this objectionable use of common salt will cause both travelers and rings to wear unduly and cause the roving to lick upon the rollers and run badly.

To overcome the difficulties of spinning salty colored cotton, I have known some spinners to use oil on their rings and travelers. It is needless to say that this should never be allowed.

The obvious method of avoiding this difficulty is to get a dyer who knows his business. Common salt, I may say here, should never be used as a so-called mordant when dyeing colored cottons for spinning. When making colored roving for the spinning frame it is best to put a good quantity of twist into it, say about 1.75 turns per inch for 1.60 hank or 2.50 turns for 3.20 hank, so as to give it plenty of strength to wind and unwind onto and from the bobbins. The roving is more liable to damage, if the twist be slight, from the strain during winding-on process on the

bobbins of the intermediate than it is by unwinding from the bobbins on the spinning frame. Even still more twist than that mentioned may be given to it if the rolls are set the proper distance apart to accommodate it, for it must be remembered that the proper setting for spinning rolls from their centers depends upon the quantity of twist in the roving as well as its thickness and the length of staple, also the draft required; an extra quantity of twist always requiring a wider setting.

In making yarns for domets it is often found necessary to produce two colors on one strand of yarn to make a mock twist. This may be done in a variety of ways. In the class of spinning I am more especially treating in this paper, the most logical way would be to combine the colors two into one on a second roving frame and then spin them single and many good effects are produced in this way; but much better results are obtained by taking two rovings of different colors and doubling them at the back of the spinning. Sometimes there is a great difference in the size of the roving. For instance, at one mill which the writer managed, we used a 1 hank black and a 3 hank white to produce a 75 hank cadet, or black and white mock twist for our fine cottonades; this was for warp, the filling being all black. This matter of running two sizes of roving may present some difficulties to the uninitiated, as the finer strand may not get as even a drawing as the coarser one. Owing to the smaller size of the finer roving the top roller does not get the same grip on it that it does on the coarser one, and when there is much twist in the finer one it may sometimes draw through without undergoing much change. This is more likely to happen when the roving is uneven, which forces more twist into the thin places and so makes the draft at that particular place so much more difficult. The only way in which two rovings of such unequal size can be satisfactorily run together is to have the coarser roving with as little twist as possible. This will allow it to spread over the surface of the rollers to a greater extent, thus giving the top rollers a closer contact with the fluted rolls and increasing the chances of giving it a firm grip upon the finer and smaller strand. The finer roving should be as even as possible and have no excess of twist and the roll should be set to work the coarser roving. Perhaps fluted rollers top and bottom might be made to work in this connection; *"verbum sat sapiente."*

In spinning yarns where two rovings are run together, some spinners advocate using a heavy traveler so as to break down the thread when one of the rovings is stopped, in order to avoid a bad place in the work. They claim the help are careless and will often allow the single to run on, thus making for considerable later trouble. There may be some truth in the position taken, but I do not think the practice a commendable one, especially if the traveler is heavy enough to injure the yarn in any way. If it does not there is no objection to this method for overcoming a serious evil.

Very often these fine rovings break out and after a longer or shorter time will catch on again. This is a very serious circumstance and should be prevented by the only certain and safe means, and that is to make the finer roving of a better quality. More twist would prevent it from breaking also, but it is a question whether it would not be productive of other troubles. In case of using more twist one might have to spread the rolls. It is a grave case, and calls for thoughtful consideration on the part of the spinner. Very often when the roving pulls through, entire relief may be found in a higher speed with the same position of the rolls. A high speed of the front rolls causes the fibers to pull apart more easily, and if not already driving the frames too fast it might be advisable to speed them up, if possible, rather than to spread the rolls. It is inadvisable to spread the rolls if it can possibly be avoided because it is only at times that these difficulties occur and at other times the rest of the work would suffer from the effects of the rolls set too wide.

It is quite possible to very much modify the foregoing preparatory system of spinning colored cottons which may be used for cheaper or rougher goods. For instance, it is quite possible to fit a 40 inch card with a licker-in attachment and card 500 pounds of colored cotton per day on it, running the slivers into four coiler cans and taking them direct to the intermediate and making into 1.25 hank roving and spinning it into 6s to 10s yarn for filling domets, cleaning cloths, etc.

It will be noted that in this case there was no double carding and therefore no doubling between the cards; the stock being made into 16 ounce laps on the breaker lapper, weighing 49 pounds to the lap and then taken to a revolving top flat card fitted with the licker-in attachment and carded into four 30 grain slivers, then taken direct to the intermediate frames and finally spun on the ring frame. Then again, for some styles of colored filling, the lappers may be eliminated altogether on many styles of mixtures, especially if the stock is going to be spun on the condenser system. In this case, the stock, after being thoroughly opened and cleaned, may be fed direct to the breaker card by an automatic feeding device of the Bromwell type.

In the condenser system of spinning, the web from the doffer is divided up into 30 to 40 strands by means of a ring doffer or a tape condenser and rubbed into sufficiently strong strands which, as we have already intimated, are wound on the long flange bobbins and taken to the mule and spun into yarn without any further treatment. There is no roller drafting in this system, the necessary alternation being affected by the "gain" or "drag" of the mule carriage; that is to say, the carriage travels faster than the delivery rolls just enough to stretch the sliver to the count desired while the twist is being put on.

The "preparation" system (i. e., the double carding, intermediate roving and ring spinning) gives the strongest yarns, the fibers are laid in a more parallel order and are made to overlap each other more smoothly and without doubt this system gives the best results when firmer and stronger and smoother yarns are required suitable for warp yarns, while the "condenser" system gives the fullest and wooliest threads more suitable for filling.

[This is the second of a series of articles on handling colored cotton. Others will appear in later issues.—Editor.]

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Don't forget that the Southern Textile Association Convention is to be held in Charlotte, Friday and Saturday, October 24th and 25th. This meeting will be of vital importance to mill men, especially superintendents. Be sure to attend!

# Sanitation in the Modern Factory

BY J. L. PLACH, S. E.*

In the past few years architects and engineers have devoted considerable time and study to the problem of sanitation in the modern factory. This problem embraces the provision of a ventilating system, heating plant, sewage disposal and last but not least the selection of the proper sanitary plumbing fixtures. It is the writer's intention to confine this article to the latter.

The importance of cleanliness in its effect on the health and efficiency of the employee, is easily understood when we consider the conditions under which men and women work in factories.

The average worker spends from nine to eleven hours daily in the factory; add to this the time required for sleep at night and we find that the greatest number of his waking hours are spent in the factory, thus the health of the employee is governed to a great extent by the conditions under which he works. It is therefore essential that all possible means are provided to protect his health and make his stay as comfortable as possible.

Factory sanitation is the most essential factor in the improvement of working conditions and welfare work. If we admit that the conditions under which men work have a direct bearing on their health, then it naturally follows that by improving those conditions we also improve the physical condition of the employee; increased efficiency and willingness are the sequence. This is not mere theory but a demonstrated fact, and facts are hard things to disprove. The employer will be largely recompensed for the expense by the increased efficiency and good will of the employee which means increased production.

The type of sanitary plumbing fixtures to be installed in a manufacturing plant should be governed by the size of the plant and the sex and class of the employees as well as by the products manufactured. For example, it is obvious even to a layman that a different selection of fixtures should be made for a food or candy factory than for a steel mill or chemical plant.

The selection should be made by the architect or sanitary engineer who is familiar with the layout and requirements and the fixtures should receive consideration in the following order of importance: 1st. Toilets and urinals. 2nd. Washing facilities. 3rd. Shower baths. 4th. Drinking fountains. 5th. Cuspidors, and 6th Emergency aid room.

Great care should be taken in the location and construction of the rooms to be used for toilet facilities. If possible these should be located on an outside wall of the building and should have at least one window to the outer air, separate toilet rooms should be provided on every floor in a convenient location. These rooms should at all times be thoroughly ventilated so that all foul odors are quickly removed. The walls and floors should be constructed of some impervious material such as tile, glazed brick or cement and the floor should be provided with a properly trapped drain so that the walls and floor may be flushed with a hose.

The closet should be of the wash down or syphon jet type, made of vitreous ware, it should have a large trap and water area and deep seal. This fixture should be provided with a good flushing rim and above all, a practical flushing de-

*Production Engineer of the J. L. Mott Iron Works.

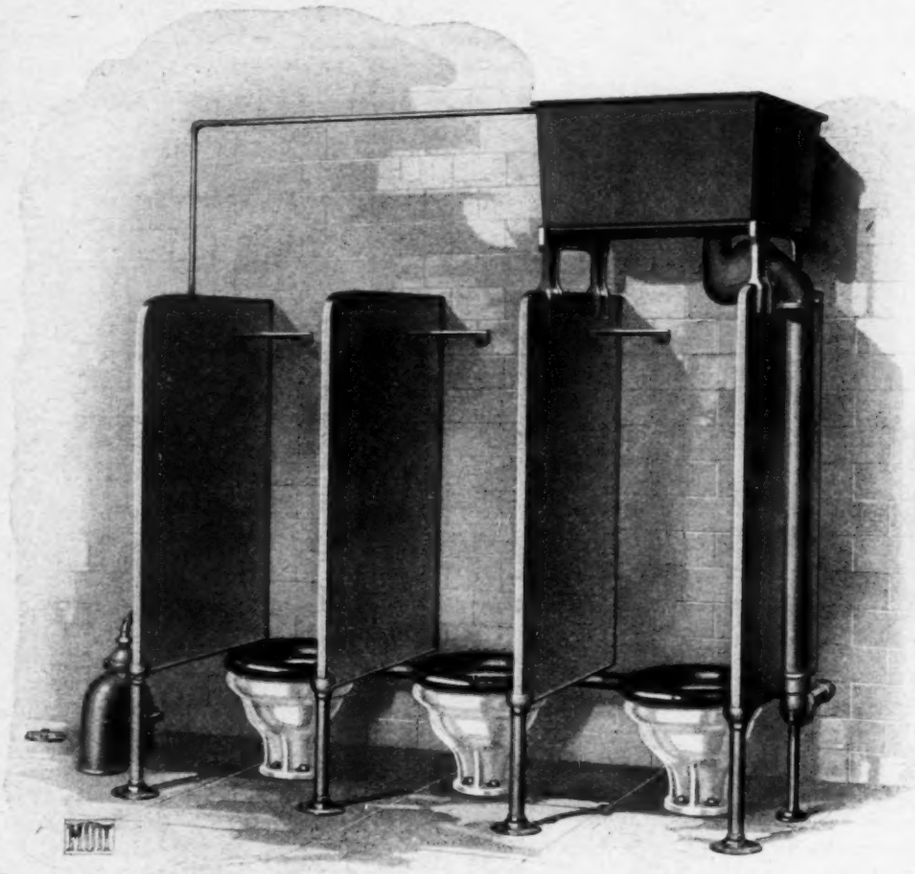


Fig. 1.

vice which should be so constructed and located as to insure the flushing of the bowl after each use.

Individual water closets with separate flushing device for each bowl are recommended, set up in batteries 24″ or 27″ apart and with 6′ high marble, slate, steel or painted cast iron partitions. Under some conditions such as inadequate water supply or low pressure in the water system it

FIG. 2.

may be necessary to install range closets, and while the range closet cannot be considered as sanitary as the individual closet, which should of course be given the preference, still as mentioned before, conditions sometimes make the range closet necessary.

In this case the type to be selected should have separate vitreous bowls discharging into a large horizontal cast iron pipe provided with a syphon trap and a large automatic flushing tank which can be regulated to flush the range at predetermined intervals. The frequency of the flush should be determined by the number of people using the range, but the intervals should not be more than a half hour between flushes. It is not advisable to flush more than 10 bowls from one tank and a second range should be installed if a larger number of bowls are needed. The bowls should be separated by partitions as described for individual closets. Fig. 1 illustrates such a closet range.

In regard to the individual water closet, there are two types of bowls which should receive consideration. Fig. 2 shows a wash down syphon action bowl with seat operating flush valve. This valve operates automatically as soon as the seat is relieved of the user's weight, this absolutely assures flushing of the bowl immediately after use. The valve can either be connected directly with the supply from the street main or may be connected to a tank supply, as it will operate at any pressure from 5 to 100 lbs. Fig. 3 illustrates the second type to be considered. This bowl is designed especially for use in factories. It is of the wash down type and has an extra large trap which makes it practically impossible for the bowl to stop up or overflow. The flushing device is located in the floor in a position convenient for the user. The sanitary features of this closet make it ideal for factory use. The number of closets to be installed in a factory as determined by experience, is generally accepted to be one closet for each 20 male or 15 female employees. On each floor where male help is employed a number of urinals should be installed, usually, one for every 30 men.

These urinals should be made of solid porcelain with all exposed surfaces glazed and should be equipped with a large outlet and strainer, and a spreader to direct the water so that the entire interior surface is thoroughly flushed. The urinal best suited for factory use is the individual type, which may be set up in batteries as shown in figure 4. The flushing of these urinals may be effected by either flushing tank, hand operated flush valve or floor valves as shown in the figure. The latter are much to be preferred as they enable the user to flush the urinal without the hand coming in contact with any pull, push button or lever. The valve is placed in such a position that its use is practically involuntary.

Ample washing facilities should be provided and the rooms to be used for the purpose should be located along an outside wall. The room should be light and well ventilated, it should be conveniently located so that employees do not lose much time going to and fro. The walls and floor should be of a water-proof material such as mentioned for toilet rooms. Washrooms should be equipped with individual lavatories or wash sinks with open strainers, drinking fountains, and one or two slop sinks for the use of the attendant.

FIG. 3.

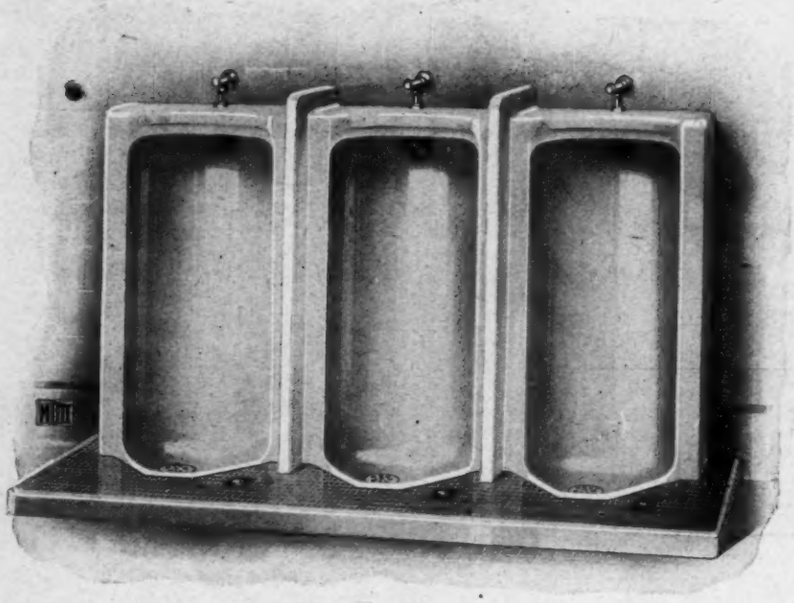


FIG. 4.

Individual vitreous porcelain lavatories are recommended. These should be equipped with open strainer, self closing faucets for hot and cold water or goose neck with rose spray for mixed water. If it is desired to arrange lavatories along the wall, they should be supported on concealed hangers. These hangers eliminate the necessity of unsightly brackets which collect dirt and dust and are difficult to keep clean. If lavatories are to be free of the wall, a pipe support is recommended as this can be easily washed and cleaned. Fig. 5 illustrates a battery of these lavatories.

While the writer recommends individual lavatories, he does not condemn wash sinks as frequently used, but when wash sinks are selected they should be of cast iron, porcelain enameled inside and provided with an open strainer so that the employee may wash in running water, and with goose necks and rose sprays. It might be well at this point to call attention to the absolute necessity of an adequate hot water supply in a factory as it is impossible to thoroughly cleanse the hands or body under cold water. Each employee should be provided with a separate cake of soap, or still better, liquid soap containers may be mounted on each lavatory or fastened to the backs of the wash sinks.

Another point which should receive serious consideration is the type of waste connection to be used with sinks and lavatories. Due to the fact that fixtures in factory wash rooms are set up in batteries, it has been customary to use a so called continuous waste under each battery with one trap at the end or center of battery. In some cases as many as 10 or 12 lavatories or 4 to 6 sinks are connected in this way. This arrangement is absolutely unsanitary and should not be adopted. The reason is obvious, when one considers that the dirty and soapy water of the 10 or 12 lavatories or the 4 or 6 wash sinks runs through a waste pipe of 20 to 24 feet in length before it reaches the trap. The interior walls of these waste pipes offer a large fouling surface on which the dirt and soap accumulate. When not in use, foul odors are permitted to escape through the open strainers of the fixtures. It is therefore advisable that each individual lavatory or sink be provided with a separate trap which can be connected either with the soil stack or with a horizontal soil pipe leading into the stack, this horizontal waste should be properly vented at the extreme end. Fig. 5 illustrates such an arrangement which is adaptable for manufacturing plants.

In some departments of factories, such as machine shops, power plants, dyeing plants, gymnasiums, etc., it is usual to install bathing facilities such as bath tubs, shower baths or swimming pools, to enable the workmen to rid themselves of grit and grime at the end o f their day's toil. For conditions

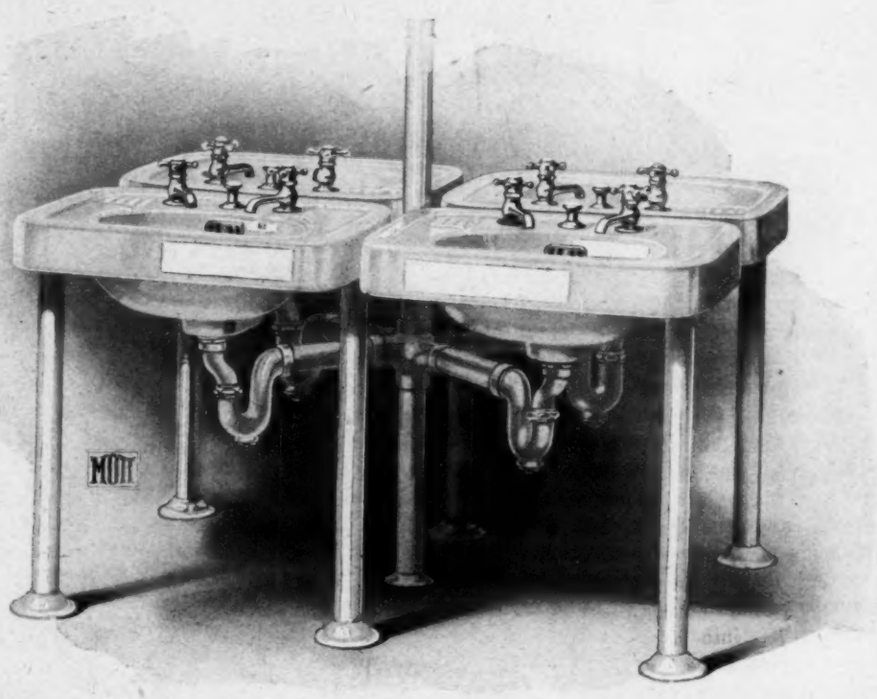


FIG. 5.

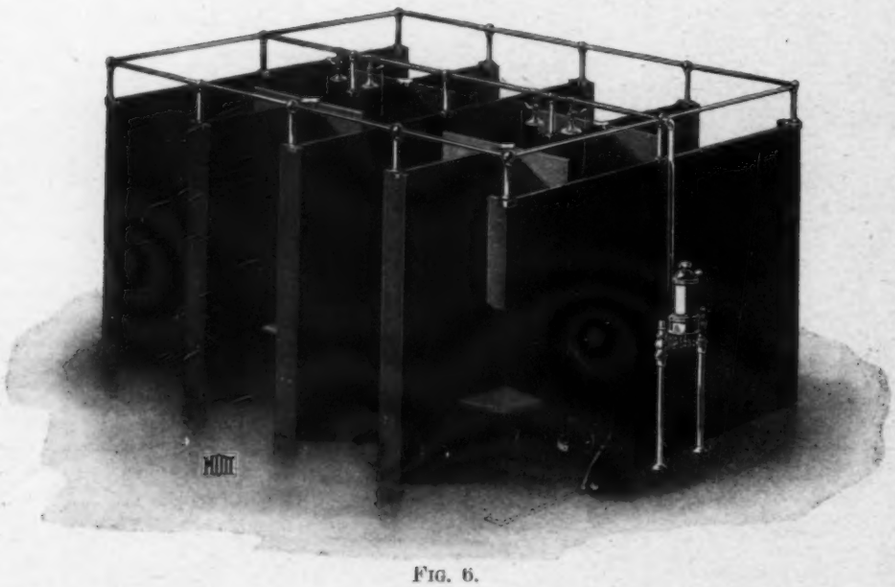


Fig. 6.

of this kind the shower bath is unquestionably the better choice. The showers should be installed in separate marble or slate stalls and each stall should be provided with a waste outlet and strainer, this will avoid the unsanitary practice of having two or more stalls drained through one strainer and the water used by one bather running over the feet of his neighbor. The showers may be installed in batteries and a thermostatic mixing valve should be provided to control the hot and cold water supply, this will permit the use of all showers at the same time (see Fig. 6 for illustration) or they may be used individually by the addition of separate self closing valves operated by means of a pull chain which will enable the user to control the shower at will.

It is important for the health and welfare of the employee that an adequate supply of pure, cool and wholesome drinking water be provided. The source of supply will of course depend on local conditions, the water may be piped from the city water main or in rural districts may be pumped from wells into storage tanks and piped from these tanks to the various outlets. In either case it is advisable to provide some means of cooling the water during the summer months. There are various ways of accomplishing this end, some large industrial establishments have installed water cooling plants with mechanical refrigerators, others have provided circulating systems in which the water is cooled in coils located in ice tanks or pits and circulated by means of a pump so as to insure constantly cooled drinking water at each nozzle. Both of these systems however, are not only costly to install but expensive to operate. Furthermore, in large plants, where the buildings cover many acres of ground the mechanical system of cooling water would be difficult if not impossible to adopt. The plan which appeals to the writer is to have a separate cooler for each fountain or for each group of fountains. This type is not only efficient but economical to operate.

There are many conflicting opinions regarding the proper construction and design of drinking fountains for factory use but all authorities agree in condemning the tin drinking cup system of the past, and in advocating the continuous fountain with bubbler. There are many types on the market which have real merit and the writer's choice

*(Continued on page 829.)*

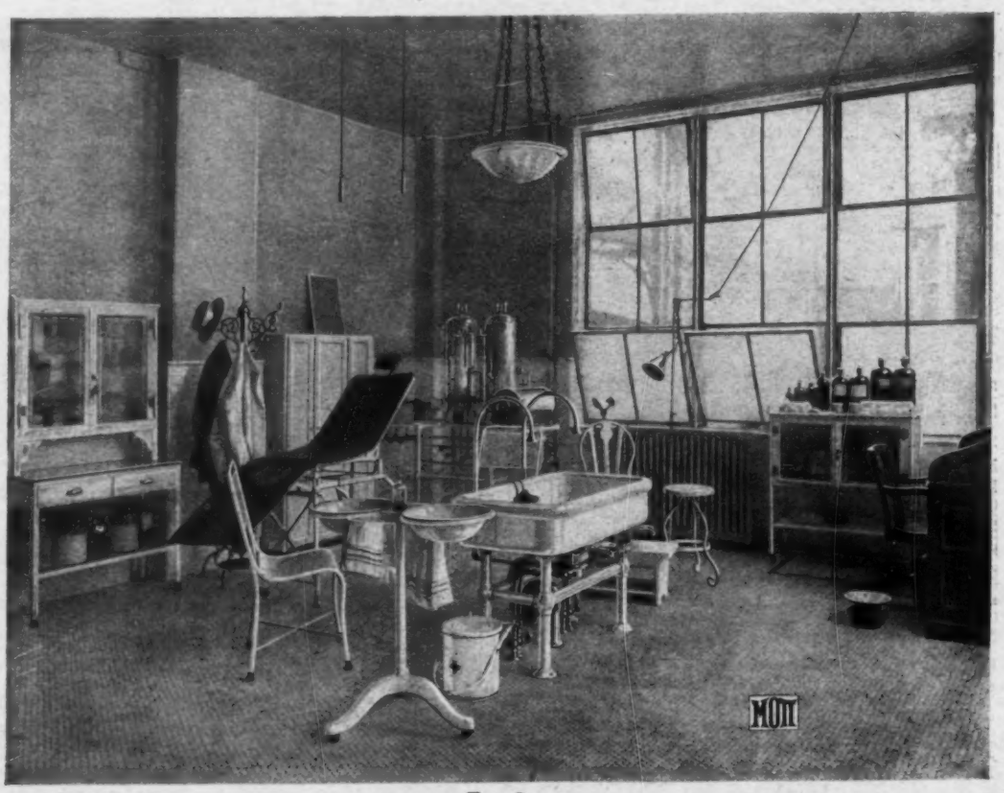
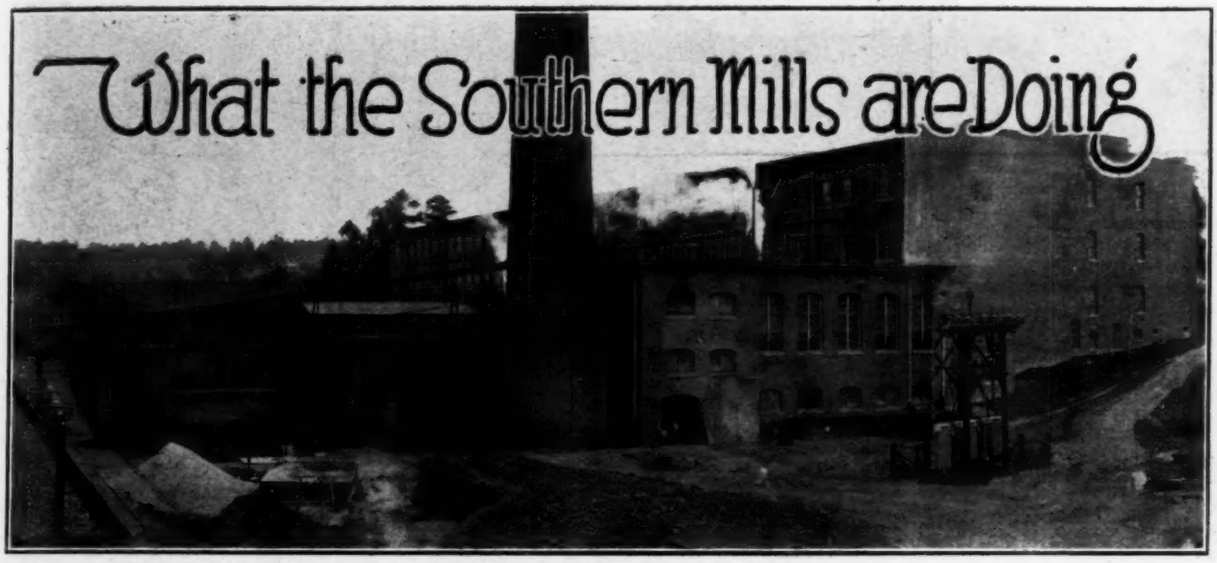


Fig. 7.

# What the Southern Mills are Doing



Indian Head Mills, Cordova, Ala.

Following protests of the American Cotton Manufacturers Association, through its traffic committee, regarding the recent decision of the U. S. Railroad Administration that it would not stand the expense of maintaining industrial sidetracks, Max Thielen, director, division of public service of the administration wrote the association, stating that the director general of the railroads had written to the regional directors that "in the absence of a written contract as to maintenance of an industry track constructed before the date of General Order No. 15., the practice of the connecting carrier prior to Federal control, as applied to such tracks of any particular industry from the beginning of its use by such industry, shall be considered as equivalent to a written contract in accordance with such practice." It is probable that the General Order No. 15 will be suitably amended. This question is important to Southern mills and should be appropriately considered.

The Eastside Mfg. Co., Inc., of Shelby, N. C., are building 80 houses for their employees at the new mill. These modern houses vary in size from three to six rooms. J. E. Sirrine of Greenville, S. C., is the engineer.

The American Processing Company, Mount Holly, N. C., is a new corporation, now building a plant at Mount Holly, North Carolina, for mercerizing, gassing and bleaching cotton yarns for the hosiery and weaving trades. This plant is expected to be in operation early in October, this year. In its layout and equipment nothing has been spared to make it strictly first class and modern in every detail. The company has secured the services of experienced and highly capable men to look after the mercerizing and finishing of its product. This mill is located in Gaston County in the midst of the combed yarn industry in the South. This county dominates the combed yarn business of the South and its mills turn out combed yarns in all numbers, of the highest quality, making this an ideal location for a mercerizing and finishing plant.

The officers of this company are C. E. Hutchison, president and treasurer; I. C. Lowe, vice-president; M. L. Barnes, secretary.

The output of the American Processing Company will be handled by The Riddle Company, Philadelphia, selling agents, and H. B. Robie, direct representative in New York.

Announcement was made recently that a controlling interest in the Chadwick-Hoskins Company, of Charlotte and Pineville, N. C., one of the larger cotton manufacturing concerns in the South, had been sold to the Cotton Mills Development Company, a corporation recently organized in New York City. Arthur J. Draper, who for several years has been president and active manager of the Chadwick-Hoskins Mills, has resigned from this position and has disposed of a considerable part of his holdings in the concern, according to an official announcement given out from the office of Mr. Draper. A substantial block of stock has been retained by Mr. Draper, and he will be chairman of the board of directors, but will not give his entire attention, as heretofore, to the management of the business.

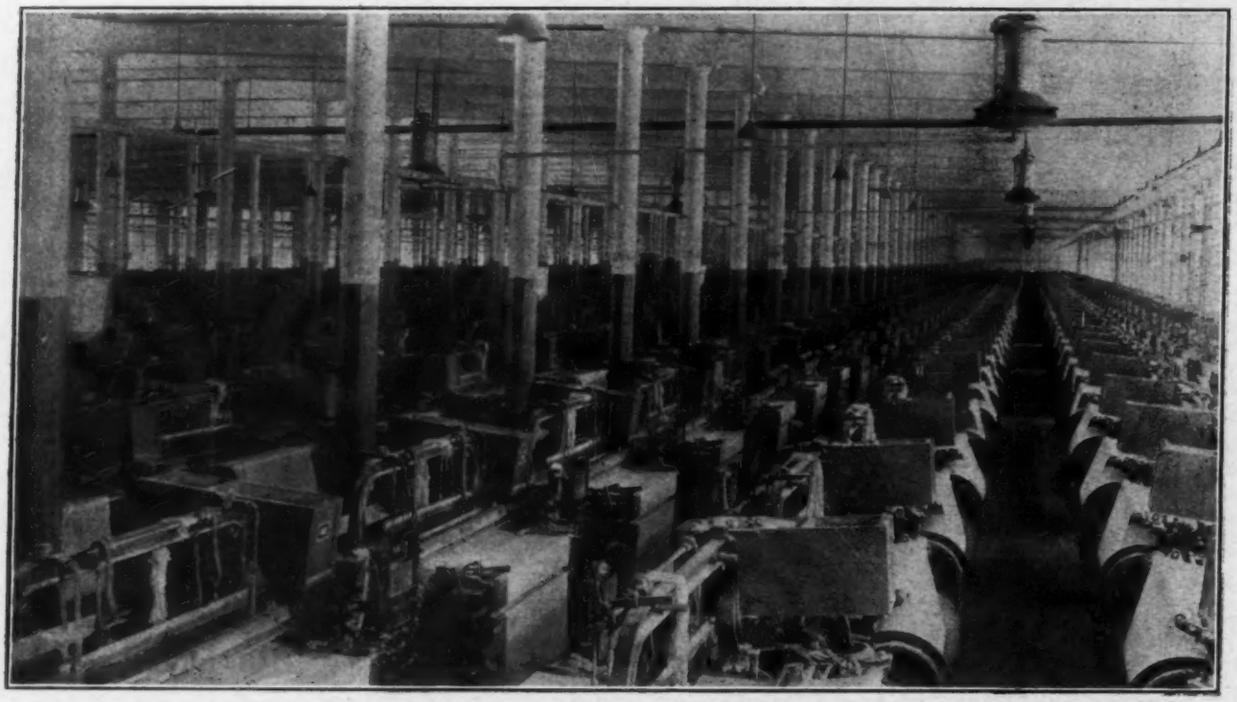
The new officials have been appointed at the Chadwick-Hoskins Company as a result of this sale. Spencer Turner, of the firm of Turner, Halsey and Company, of New York, will be the new president. Mr. Turner, although a young man, is a commanding figure in the textile trade. He is a grandson of J. Spencer Turner. Grosvenor Ely, present treasurer of the Ashland Cotton Mills, Jewett City, Conn., is the new treasurer of the company, and is an experienced mill man of recognized standing in the textile industry. Both these new officials rendered marked service for the government at Washington during the war, and by their efforts, greatly minimized the difficulties of mill men.

E. C. Dwelle, who has been secretary and assistant treasurer of the company since its organization in 1908, will continue with the company in this capacity. H. H. Boyd will continue as general superintendent.

Purchase of the Clinchfield Manufacturing Company's cotton mills at Marion, N. C., by D. D. Little, president and treasurer, and Leslie Evans and Co., of New York and others, was recently announced. The two mills of this company contain about 70,000 spindles and 1,600 looms.

The Vance Cotton Mills, with an authorized capital stock of $500,000 is a new corporation recently formed at Henderson, N. C.

The Glencoe Cotton Mills, Columbia, S. C., are preparing to build a number of four and six-room houses, which



THE WEAVE ROOM AT THE ERLANGER MILLS, LEXINGTON, N. C.

will be occupied by their operatives, rent free.

The Groat Cotton Mill, Augusta, Ga., was recently destroyed by fire. The loss is estimated at $150,000.

The Hamilton Carhartt Cotton Mill will spend approximately $75,000 in new houses and other improvements at their plants at Rock Hill, S. C., and Carhartt Station, S. C. Twelve new houses, having electric lights, baths and sewerage will be erected at the latter mill and the streets will be paved and otherwise improved at this mill village. Other improvements to be made by this company include the installation of new machinery, the construction of a brick store house, a school house and a community building. A welfare department, to include the services of a trained nurse, to look after the health of the operatives, will also be established.

A majority of the stock of the Ella Manufacturing Co., Shelby, N. C., has been sold to Converse & Co., commission merchants, of New York. Nearly $700,000 is said to have been involved in the transaction. This mill is a 10,500 spindle plant. John R. Dover, secretary and treasurer, will remain in his present position until the outstanding contracts are filled.

The Kershaw (S. C.) Cotton Mills are to erect several new houses to provide for the housing of their operatives.

The Victor-Monaghan Mills, Walhalla, S. C., plan additions to cost $150,000, it is reported. These mills recently bought 500 additional looms from the Loray Mills, Gastonia, N. C.

The Manchester Cotton Mill, at Rock Hill, S. C., has been sold to A. C. Barrow, representing the Jobbers Overall Company, of Lynchburg, Va. The transaction involves approximately three-quarters of a million dollars. The mill will be transferred to its new owners January 5, 1920. There will be no change in the office force of the mill, it is announced.

Sanitary plumbing equipment adds to the efficiency of the operative. Recognizing this, the Mobile Cotton Mills, Mobile, Ala., The Meritas Mills, Columbus, Ga., and the Aragon Mills, Rock Hill, S. C., are equipping additional toilet and wash rooms with "Mott" plumbing.

Work has begun on a new 5,000 spindle mill, to be known as the Margrace Mills, which is to be erected at Kings Mountain, N. C., by C. E. Neisler. 100 looms are to be installed for dobby weaves.

The Wahoo Manufacturing Company, Sargent, Ga., will provide space for 3,000 additional spindles, which will more than double the capacity of the plant.

The Acworth (Ga.) Cotton Manufacturing Company, manufacturing yarns, is considering doubling its capacity. This mill was recently bought by W. F. Hetrick of Gainesville, Ga., and others.

Plans are being prepared for the building of a $500,000 mill by the Chester Goodyear Company, manufacturing cotton and wool waste and shoddy, at Greenville, S. C.

The Klumac Cotton Mills have incorporated as Salisbury, N. C., with a capital stock of $200,000. The incorporators are W. F. McCanless, C. H. Kluttz and Daisy J. Kluttz.

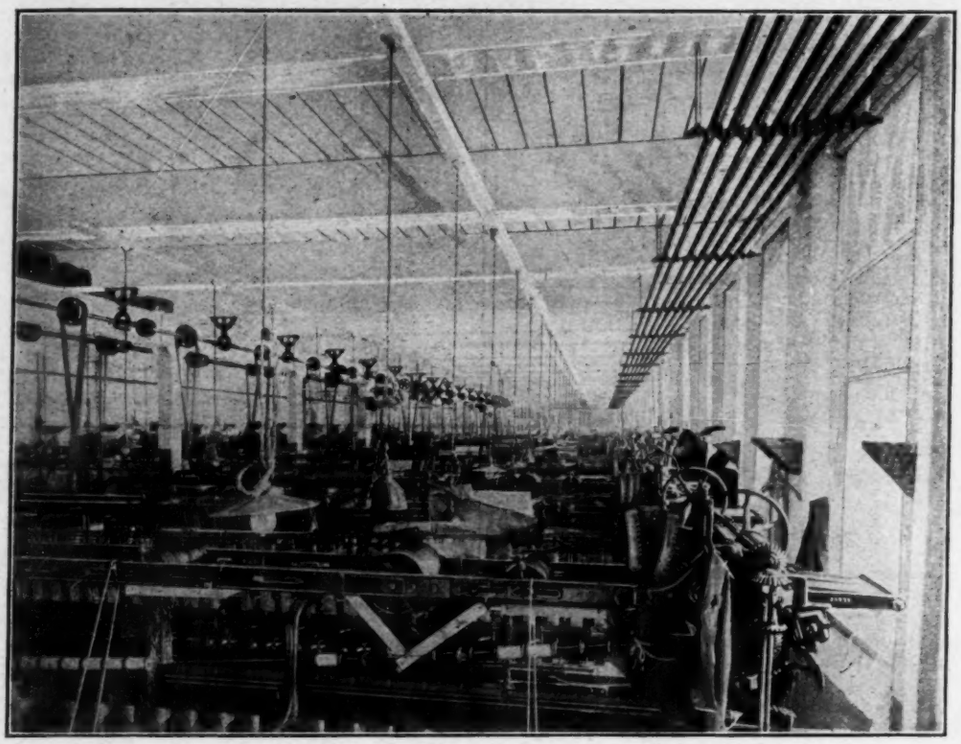
The Belle Vue Manufacturing Company, which recently increased its capital stock to $500,000, will erect new buildings and install additional weaving machinery and spindles and looms.

Work has begun on the new addition which will be built by the Globe Manufacturing Company, Gaffney, S. C., and which will increase the capacity of the plant one-third. The increase in spindles will be 1,727 and the looms will be increased in proportion.

A mill village plumbing installation of interest is that of the Spartan Mills, Spartanburg, S. C., now under construction. "Mott" equipped, each house has a bath tub, lavatory, sink and toilet.

The newly organized Cash Mills, Gaffney, S. C., are planning a sixty acre mill village for their operatives. This

# Paint Your Factory Walls and Ceilings with



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village will be modern in every respect. E. S. Draper, of Charlotte, N. C., is the architect.

The Eastside Manufacturing Company, Shelby, N. C., has retained E. S. Draper, landscape artist and city planner, of Charlotte, N. C., to work up plans for village developments and to lay off the entire village for construction.

The mill village of the Tipton (Tenn.) Cotton Mills has been painted and the houses fully repaired. A club house has been placed at the disposal of the operatives of this mill, and is up to date in every respect, being equipped with a kitchen outfit, phonograph and reading tables with current magazines. The mill is constructing a 50 x 75 foot addition to the warehouse, which will have a concrete floor and a modern sprinkler system.

The LaFayette (Ala.) Cotton Mill, recently organized, has elected James A. Hines president. The company has a capital of $500,000 and will manufacture cotton yarns.

The controlling interest in the Atherton Mills, Charlotte, N. C., was recently acquired by John C. Rankin and S. M. Robinson, of Lowell, N. C. This mill has 10,000 spindles and manufactures 40-2 yarns. It was the pioneer mill in the South to manufacture this high grade of yarn.

The Rainbow Manufacturing Company will be the name of a new cotton mill to be built in Ozark, Ala., of which E. L. Dowling will be president. The mill will manufacture coarse yarn, twine and rope and will have between 2,000 and 5,000 spindles.

The Georgia Mills No. 2, Griffin, Ga., have installed a system for supplying fresh water throughout the mill. An air compressor for cleaning machinery has also been added to the mill's equipment.

The Cliffside (N. C.) Mills are building a three-story

New School Building Recently Erected at the Covington (Ga.) Mills.

$50,000 Y. M. C. A. building. It will contain a reading room, library, gymnasium for both sexes and a large auditorium.

The South Texas Cotton Mills, Brenham, Texas, have purchased 150 Draper looms, a dustless card stripping equipment, and some new cards. They are also building a community house, a dancing pavilion, and a new warehouse. Their opening room is also equipped with a vertical opener.

The Savona Manufacturing Co., Charlotte, N. C., has installed 24 terry towel looms and 52 dobby looms. This mill makes Turkish and huck towels, and does its own bleaching and finishing.

The Coosa Manufacturing Company, Piedmont, Ala., will build a new $400,000 addition, which will house 15,000 more spindles, and will be electrically driven.

The Roanoke Mill No. 2, Roanoke Rapids, N. C., are adding a weave room 274 feet long by 158 feet wide, one story high, which will accomodate 700 wide automatic looms, each loom to be equipped with an independent motor. This mill is also building a finishing plant three stories high, 103 x 158 feet, and a dye house, 50 x 75 feet and one story high. The whole plant will be electrically driven and will cost approximately $500,000. In addition, this mill has built 65 modern tenement houses.

The modern mill village being constructed by the Beaumont Mills, Beaumont, S. C. is nearing completion. Each house is being equipped with "Mott" plumbing—bath tub, lavatory, sink and toilet.

The Pomona Mills, Inc., Greensboro, N. C., are to build an addition for a dyehouse and finishing room. This will be 125 x 95 feet, three stories, in combination reinforced concrete and standard mill construction. The engineering work is in the hands of J. E. Sirrine, Greenville, S. C.

J. E. Sirrine is also engineering an extension, 56 x 136 feet, of standard mill construction, at the plant of the Southern Mercerizing Co., Tryon, N. C. Additional machinery is to be installed.

## The New England Mill Situation.

Since the close of the summer holidays there has been a little gain in the production of mills in this section. Much is yet to be gained before a capacity output is possible. There have been some rumblings of further demands for wage increases and it will soon become known what action unions will take in the matter of the wage agreement that expires in December.

Previous to the recent outbreak in Boston in the matter of police unionism it was felt among textile manufacturers that radicalism in union demands was being checked but it is now uncertain what the course of events will be. Very recently the Fall River cotton manufacturers held a long consultation with representatives of the unions in that city to see what could be done to improve the working conditions affected by the low grade of cotton coming to the mills. The conference was amicable in every way and the relations of the unions and manufacturers are better than they have been in a long time. Despite this, however, there are certain radical elements at work and it is believed they will push for a still higher wage cost.

The actual condition of production as to labor was shown in the statements made when spring dress gingham prices were named after Labor Day. It appeared that the large gingham mills have been operating between 65 and 70 per cent during the summer and are unable to do much more through inability to secure skilled help in various departments, principally in beaming, weaving and dyeing. In the northern section where nearly all the gingham mills are located there was a considerable exodus of help to Canada during the war and it has not been infrequent in some of the large corporations to have 4,000 looms standing idle. In the case of the Everett mills at Lawrence where a long strike was in progress, it has been found very difficult to secure old operatives or new ones.

As one consequence of this condition the new prices named for spring were on a higher level than the government fixed last year. Utility dress ginghams made by the Amoskeag Company were priced at 27½c, Everett Classics at 24c, staple ginghams at 22½c, AFCs and Toile du Nords at 30c and 29c respectively. The government prices were based on 24c net for the Utility grade and the new prices are subject to discounts of 5 and 5 and 5, the latter having been granted during the year as a concession to the demands of the jobbers' associations.

All of the leading mills allotted their output for delivery up to April and were unable to meet more than half the demands of their customers. If production increases during the winter, further allotments will be made. In order to assist in increasing the output, agents were instructed to sell only 50 per cent of large plaids, the balance to be in stripes, small checks, or plain weaves. The scarcity of ginghams has been enhanced by the very large consumer demand as a result of persistent advertising and a style vogue. The high prices now current at retail are certain to curtail consumption but with the potential export trade and the curtailed production, there is little doubt that mills will be able to hold their prices and sell all they can make.

The naming of prices on ginghams has done much toward steadying the prices asked for other finished goods. The gray goods markets have been very weak and prices have declined. Wide print cloths, 38½-inch 64 x 60s, dropped to 14¼c a yard in the selling centers. The mills in this section would not meet that level and have been selling very moderately, Fall River reporting sales for several weeks of about 50,000 pieces, or about one-fifth of the possible output. As the mills are well under contract for some time to come and as the business in odds and fancies has continued good, there have been no stock accumulations. The feeling is strong that the markets cannot go very much lower unless there is a further break in cotton.

In view of the very profitable margin that still obtains between cotton and cloth there is little heard in the markets concerning the price of cotton, and manufacturers are untroubled by a price of 30c a pound. They are far more anxious about the crop reports that show a low grade crop in prospect. This will be very serious as many of the mills have been short of good grade cotton for some time and have been meeting several troubles in trying to spin it during the summer. The scarcity of long staples, say anything above full eighths is certain to cause a great deal of trouble, especially if an early frost date curtails the growth of cotton still more.

The fine yarn mills have an abundance of work in hand. Prices have declined very little and most of the mills have contracts in hand to carry them well through the year. Wherever any mill is engaged on work connected with the automobile industry, activity is pronounced and good orders are in hand. This applies to tire products, and goods required in the upholstery of cars. Many sorts of wide drills and extra wide plain cloths used in the manufacturing and automobile trades are held at as high prices as they were in June, one reason being that the mills do not require any additional business at this time.

The print cloth situation is not expected to improve much until prices are made for prints and percales after October 1. The printers guaranteed their prices to that date by affording stock protection to jobbers. If prices were to be named today substantial reductions on percales and prints

# Barrett Specification Roofs

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When planning to cover any flat-roofed building, remember this—

*No matter how good the roofing is, unless it has a wearing top surface, such as gravel, slag or tile, it is like a book without a cover—it isn't finished.*

That is why, when The Barrett Specification was worked out years ago, the engineers insisted not only that it should be built up of the two most serviceable roofing materials in the world—pitch and felt in alternate layers—but that it should have a top-wearing surface of gravel, slag or tile.

It is imperative that every flat roof have such a wearing surface—

*To protect the roofing materials from the direct destructive action of rain, snow, ice and sun.*

*To form a wearing-surface to protect the roofing materials from scuffing feet and the dragging of heavy objects over the roof.*

*To make the roof highly fire resistant so as to secure the base rate of fire insurance.*

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The guarantee is in the form of a Surety Bond, which we offer on all roofs of fifty squares or more in towns of 25,000 population or over, and in smaller places where our Inspection Service is available. Our only requirement is that the roofing contractor shall be approved by us.

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To make certain that your roof will be built according to the best scientific roofing principles, with 20 years of service guaranteed, you have only to insert in your building specifications this paragraph:

"The roof shall be laid according to The Barrett Specification, dated May 1, 1916, and the roofing contractor shall secure for me (or us) the 20-Year Guaranty Bond therein mentioned."

Copies of The Barrett Specification, with roofing diagrams, will be mailed free upon request.

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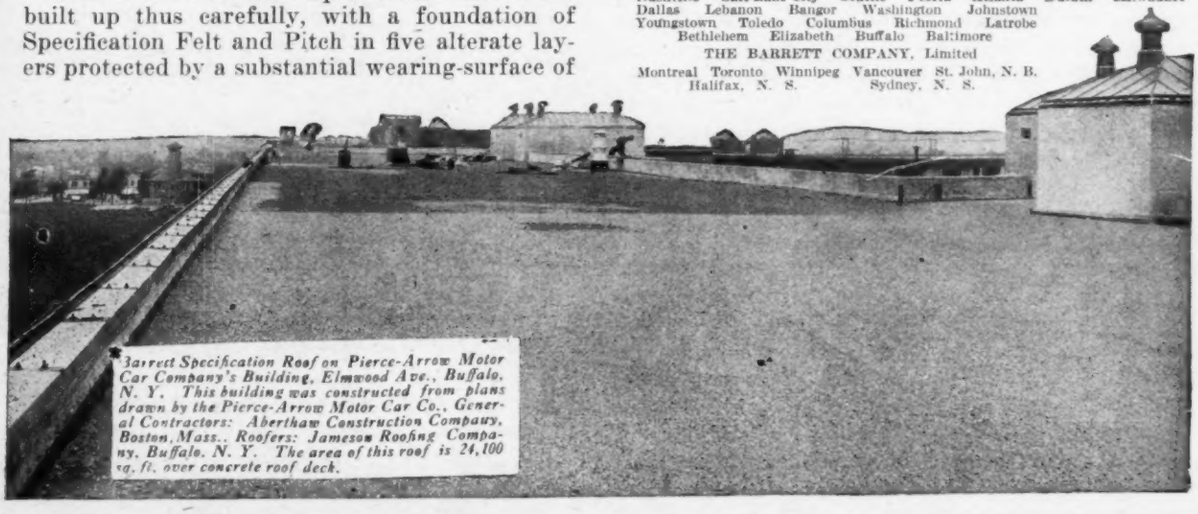

*Barrett Specification Roof on Pierce-Arrow Motor Car Company's Building, Elmwood Ave., Buffalo, N. Y. This building was constructed from plans drawn by the Pierce-Arrow Motor Car Co., General Contractors: Aberthaw Construction Company, Boston, Mass., Roofers: Jameson Roofing Company, Buffalo, N. Y. The area of this roof is 24,100 sq. ft. over concrete roof deck.*

would be asked by the trade. Yet it is quite possible that a reaction to higher levels in gray goods markets may enable printers to hold their present values to the end of the year or until they have been able to accummulate some goods and make more headway on back orders. The job printers are very busy on spring goods, especially voiles, organdies, and specialties.

Bleached cottons, branded, have held firm. There are so many undelivered orders on the books that manufacturers have felt inclined to assist the jobber in his merchandising by holding the prices steady. Unbranded bleached cottons have fallen in price steadily in keeping with the steady decline in gray cloths and the manufacturing trades have been able to get goods at more advantageous prices where they are ready to take in spot merchandise.

The fine and fancy goods mills making combed yarn fabrics have been slow sellers all summer. Their advance business was large enough to take care of the limited output and they have hesitated about going into the later months until they were nearer the cotton crop and also nearer the date when a wage change is possible. Very recently they have manifested more willingness to accept orders for fancy weaves which have been scarce in the trade and which are greatly wanted. There is little reason to look for any slump in the fine goods trade for a long time as prices are relatively more attractive than those prevailing for many other coarser fabrics. Some of the mills are getting back to their pre-war condition where they are interested in developing finer and fancier cloths of silk and cotton, while others are still hampered by the disorganized condition of operatives.

All heavy colored cottons are reported as well sold especially any of the suiting grades, denims of the better qualities, and most of the tickings. The mills making napped goods have a satisfactory future ahead of them owing to the certainty that any gingham looms available in normal times for fancy flannellettes will be required on more profitable work. The jobbers are understocked on many of the lighter weight napped cloths. There has been a very good foreign business done on cotton blankets, a fact that has not yet impressed itself on the domestic trade. Quilts are well sold to the end of the year.

The situation with cotton machinery plants is extraordinary. For the first time in their history some of the largest plants have ceased to accept any new business. They are unable to promise definite deliveries within a year and in some cases within two years. They not only have an abundance of business for home trade but they are able to sell abroad if they were able to produce. They are running 48 hours a week and in some cases they are not getting more than 65 per cent of the pre-war product. The indifference and inefficiency of skilled workers is a result of the reaction from war and time alone will cure it. All that has been asked in the matter of hours and wages has been conceded and now the workers are loafing on the job at a time when the world is calling for American cotton mill machinery as never before.

In addition to the new Nashua mill that is being built at Nashua, N. H., the Knights in Rhode Island have started work on a large new mill of 90,000 spindles to replace the Riverpoint mill destroyed by fire earlier in the year. A new weave shed will be built to accommodate 3,000 Draper looms and the site of the old mill will be covered with a large and finely equipped spinning plant.

It is probably not realized throughout the trade as a whole to what extent the capacity for production is being increased by additions to old plants and proposed new ones. One machinery concern alone is reported to have in hand orders for a million spindles. They cannot be filled for at least two years. Another concern that has equipped some of the finest cotton thread mills in the world is reported to have orders in hand for 300,000 spindles for new mills to be added to these plants. There are a number of foreign orders in hand for Japan, South America, and elsewhere. It was reported in machinery circles a week ago that a large Japanese company was trying in vain to interest machinery builders in orders for more than half a million spindles to be built any time in the next three years.

New England cotton manufacturers will be fully represented at the World Cotton Conference at New Orleans next month. During the past month they have been entertaining several visitors from Europe who are here to attend the convention or conference.

Concerning the conference they feel that something must be done to show the planter the wisdom of cooperating more closely with the manufacturer in order to improve the grades and to take care of the product after it is grown. It seems a crying shame to many of them that the actual grower and the actual user of cotton have been kept so long apart where their common interests are so closely related. The war has shown that the consumer of cloth will pay prices that warrant fair prices for the cost of growing cotton. Starting with that foundation it ought to be possible to build mutual relations that will make the great American staple what it can be in the world's life.

## The Yarn Market.

The cotton yarn market during the latter days of the month of August was marked by a total lack of interest on the part of the buyers, especially in the Philadelphia market. Business during the early days of the month was thought by many persons and concerns interested to have reached a minimum, but the dearth of orders of any importance during the latter part of the month gave the most experienced market observers some new ideas as to how dull a market can become.

Naturally, with this lack of business before them, there was a corresponding increase of effort on the part of the selling end of the market to get yarns into motion. Although the spinners' representatives and the brokers appeared to be complacent and calm over the unusual situation, there could be noted about this time a growing eagerness on the part of sellers to court inquiries and make price concessions.

However, these much-looked for inquiries failed to come to the sellers. The buyers seemed to have placed themselves in the position the spinners took when prices were exorbitant, and be laconic and indifferent concerning the yarn market. Therefore, the natural thing to occur would be the making of price concessions on the part of the dealers. This, they thought, should attract the buyers and bring them in on the market. Big reductions were made in some sections of the list, ranging from one cent to 13 per cent of the entire price. But this failed to prove a drawing card to persuade the buyers to enter the market. Instead of stimulating business, as the dealers expected, this lopping off of market values seemed to result only in more strongly entrenching the buyers in the position which they already

occupied. "If refraining from buying will cause a downward revision of prices, then why not stay out longer and bring the prices down to rock-bottom," seemed to be the general opinion of the buyers.

The early days of September saw a weak effort on the part of the market to take a new hold and pull itself back up to the position which it had held for about four months previous when the market was in the hands of the sellers. Evidence of a rally, however, was shown in only some of the sections of the list. Firmness developed in 20s and 22s of Southern frame spun carded yarn on cones and in some places, dealers moved up quotations a cent a pound, which was a very unusual step at that stage of the game.

As the month progressed, sellers continued slashing prices right and left in some grades ofyarn. These price recessions in certain sections of the list were, however, accompanied by advances in other lines. The declines in southern single warps, 30s and 40s; two-ply skeins, 30s; two-ply warps, 20s, 30s and 40s; and the lower numbers of Southern frame spun carded yarn, and others, were accompanied by continued upturns in the prices of 20s and 30s hosiery yarns. This division in the list was further accentuated by sales of two-ply combed peeler skein 60s at prices as high as $1.90 a pound, according to report. At the same time, it was stated that the inside figure, $1.80 a pound, remained unchanged for a small quantity of yarns which changed hands at the same time. This shows which way the wind blows, insofar as the finer yarns are concerned, observers assert.

As the month of August has been on record every year as being the dullest month in the yarn market, as well as all other commodities, those interested did not seem affected by the dullness which prevailed during that month, but as September came along, they began to become expectant, and looked for the long-wished for letters, but outside of a few inquiries and the small orders which came from those buyers who needed small shipments of yarn for immediate use, the hopes of the sellers were in vain.

Mercerized yarns continued to hold well the extremely high quotations of some time past. It seems probable that there is little chance of a reduction in mercerized as long as the scarcity in artificial silk continues. Hand to mouth purchases are the order of the day in this, as in other lines. Buyers dare not stock at present prices, as a slump in yarns might let them in for big losses.

Following are middle of the month quotations on the Philadelphia market:

**Southern Single Skeins.**

| | | | | | |
|---|---|---|---|---|---|
| 4s to 8s | .54 | @55 | 10s | .55 | @56 |
| 12s | .56 | @58 | 14s | .58 | |
| 16s | .58 | @59 | 20s | .60 | @61 |
| 24s | .65 | | 26s | .66 | @67 |
| 30s | .80 | | | | |

**Southern Single Warps.**

| | | | | | |
|---|---|---|---|---|---|
| 8s | .55 | @56 | 10s | .56 | @57 |
| 12s | .57 | @58 | 14s | .58 | @59 |
| 16s | .60 | @61 | 20s | .63 | @64 |
| 26s | .78 | | 30s | .80 | @81 |
| 40s | .92 | @93 | | | |

**Carpet and Upholstery Yarns in Skeins.**

| | | | | | |
|---|---|---|---|---|---|
| 8-4 slack | .55 | | 9-4 slack | .56 | |
| 8-3-4 hard twist waste | .50 | @51 | 8-3-4 hard white warp twist | .53 | @54 |

**Southern Two-Ply Skeins.**

| | | | | | |
|---|---|---|---|---|---|
| 8s | .55 | @56 | 10s | .57 | @58 |
| 12s | .58 | @59 | 14s | .60 | |
| 16s | .61 | | 20s | .66 | @67 |
| 24s | .75 | @76 | 26s | .76 | @77 |
| 30s | .82 | @83 | 40s | .93 | @95 |

**Southern Two-Ply Warps.**

| | | | | | |
|---|---|---|---|---|---|
| 8s | .56 | @57 | 10s | .57 | @58 |
| 12s | .60 | @61 | 14s | .61 | @62 |
| 16s | .63 | | 20s | .68 | @69 |
| 24s | .78 | @80 | 26s | .81 | |
| 30s | .82 | @83 | 40s | .95 | @$1.00 |

**Two-Ply Combed Peeler Skeins.**

| | | | | | |
|---|---|---|---|---|---|
| 20s | .95 | @$1.00 | 24s | $1.05 | @$1.10 |
| 30s | $1.15 | @$1.20 | 40s | $1.50 | |
| 50s | $1.65 | | 60s | $1.80 | @$1.90 |
| 70s | $2.20 | | 80s | $2.50 | @$2.60 |

**Southern Frame Spun Carded Yarn on Cones.**

| | | | | | |
|---|---|---|---|---|---|
| 8s | .53 | @54 | 10s | .54 | @55 |
| 12s | .55½ | | 14s | .56 | @57 |
| 16s | .57 | @58 | 18s | .60 | @61 |
| 20s | .64 | @65 | 22s | .65 | @66 |
| 24s | .66 | @67 | 26s | .67 | @68 |
| 30s | .71 | @72 | 40s | .84 | @85 |
| 30s tying-in | .59 | @60 | | | |

**Northern Mule Spun Carded Yarn on Cones.**

| | | | | | |
|---|---|---|---|---|---|
| 10s | .63 | @65 | 12s | .64 | @66 |
| 14s | .65 | @67 | 16s | .66 | @68 |
| 18s | .67 | @69 | 20s | .70 | |
| 24s | .74 | | 26s | .76 | |
| 30s | .77 | @80 | 40s | .94 | |

**Northern Mule Spun Combed Peeler Yarn on Cones.**

| | | | | | |
|---|---|---|---|---|---|
| 10s | .79 | @83 | 12s | .80 | @84 |
| 14s | .83 | @85 | 16s | .84 | @86 |
| 18s | .84 | @87 | 20s | .84 | @88 |
| 22s | .85 | @90 | 26s | .89 | @95 |
| 30s | $1.00 | @$1.05 | 36s | $1.10 | @$1.15 |
| 40s | $1.20 | @$1.30 | | | |

## Cotton Comment.

BY H. AND B. BEER.

New Orleans, September 10th, 1919.

Results of the Government's drive against the high cost of living, the demoralization of foreign exchange, more favorable weather in the interior giving promise of a somewhat larger crop than the government forecasted in August —11,230,000 bales exclusive of linters vs. 11,016,000—are noted in a much lower price for cotton compared with one month ago.

Large stocks of cotton goods held on speculation were thrown on the market, thereby weakening the goods markets and lowering prices for the mill product, exports of raw cotton were restricted by the weakness in foreign exchange, and the impression gained ground that since other commodities were declining. raw cotton must decline also.

The movement for lower prices has been successful so far. with cotton participating in the depression. However, it must be realized that the high cost of living has made it very expensive to grow cotton this year, owing to high wages, high cost of provisions and everything used in the making of a crop.

While the outlook for this year's yield is somewhat larger than indicated one month ago, the crop has not made the progress expected, considering the better weather of late, owing to further damage by insects and lateness of maturity. The very lateness of the crop is noted by the smallest ginnings to September 1st since 1903, only 139,000 bales vs. 1,038,000 last year and 615,000 year before last, Texas being credited with only 34,000 against 752,000 one year ago and 407,000 in 1917.

Furthermore, in arriving at this year's indicated yield, the government only allowed the usual 1 per cent for land abandoned, whereas private advices point to about 5 per cent of acreage abandoned this year. The Agricultural Department, Washington, has been instructed by Congress to make a report on the actual percentage of acreage abandoned, which is usually held back until December when the government issues its final crop estimate.

The shrinkage in consumption of raw cotton in the United States, North and South, due to shorter working hours and scarcity of labor, which for July was 510,000 bales vs. 542,000 last year, for 12 months 5,786,000 against 6,566,000, linters not included, exerted a depressing influence also. However, efforts are being made on the part of spinners to increase the mill output by increasing the number of active

spindles, which, at the close of July, were 34,184,000 vs. 33,658,000 last year, the largest on record, and better results are likely to be obtained in the future.

Efforts are also being made in Congress to enact legislation for the purpose of stabilizing foreign exchange. Several bills have been introduced already with that object in view and are meeting with favorable progress so far.

Uncertainty regarding the ratifying of the League of Nations is causing some concern throughout the world, especially in Europe, but sentiment in America seems to favor ratification, already delayed too long, at an early date in order that confidence may be restored throughout the world, particularly in financial and political circles. Stabilizing of foreign exchange and ratification of the League of Nations by Congress probably would remove the pessimistic feeling prevailing in trade, financial and political centers.

Because of the very light ginnings to September 1st, which are likely to continue comparatively small for some time to come, receipts are running very light and promise to remain small for a long while in the future. Therefore, statistics are likely to work bullish from now on, especially if exports are free, as stocks are likely to figure comparatively small from now on.

In the event of an early frost overtaking this very late crop, further serious damage is probable. An early winter would likely prove disastrous to the growing crop.

## Lancashire Notes.

BY AN ENGLISH CORRESPONDENT.

In the opinions of certain groups of wealthy business men, there seem to be profitable times in store for the cotton trade, judging by the rate these men are buying up Lancashire concerns. This buying has been going on for some time, but has been exceptionally heavy lately, some recent purchases involving the amalgamation of several mills under a syndicate.

All these transactions are, of course, conducted in privacy and the trade in general has no exact information as to who is behind the syndicates or just how many have been and are at work, though it is thought that some are located in London. All that is known at present regarding this rush in buying is that many mills have changed hands at very high prices. Take, for example, the case of the Saxon Mill, of Drovlsden, near Manchester. As a result of a recent purchase, the shareholders of this mill will receive 12 pounds, 5 shillings for every five pound share on which 5 pounds, 10 shillings has been paid up. This, however, is but a modest price compared to that paid for the Wye Mill, at Oldham. The buyers of this mill paid no less than 16 pounds for 5 pound shares on whien only 10 shillings had been paid up, of that 10 shillings, 5 having been added to capital from the reserves a few months ago. I have heard of another instance in which the shareholders have been offered 29 pounds for 10 pound shares on which only 6 pounds had been paid up, including 30 shillings added as bonus not long ago.

As to whether such prices are extravagant or whether the purchasers have really made good deals for themselves, the *Textile Mercury* carries some interesting comments. It remarks that it is the custom here to state the value of mills in terms of spindles. Prior to the war, mills were often erected and equipped at from 25 to 30 shillings a spindle, and the *Mercury* understands that the syndicates have in many instances paid a price of from 2 pounds to 2 pounds, 10 shillings a spindle. This under ordinary circumstances, would be a big price to pay for a mill which has been in use, but today the matter takes on a different aspect. Because of higher prices, a mill could not possibly be erected and equipped today at anything near 2 pounds, 10 shillings a spindle. A mill equipped with first-class machinery probably would work out at 5 pounds a spindle and even at that figure, there would be difficulty in getting it erected in a reasonable time. Therefore, even if the syndicates are paying 5 pounds a spindle for the mills, they are not paying more than the value of mill property, owing to war conditions, would seem to justify.

The removal of government control from over the Egyptian crop, which took place August 1st last, is generally thought to be an unwise measure. The cotton trade is still in the transition stage from war-time to peace-time and it is thought that it would have been better to have waited until things become more settled before allowing the crop to become subject to the play of normal commercial forces. Higher and fluctuating prices will be the inevitable result of the disappearance of government control.

Government control in this instance had proved quite successful. It began in a limited form and culminated in the purchase by the government of the whole crop and the selling of it to the trade at a price which covered the cost of the actual transactions involved. A definite relationship between price and cost was maintained, and as a consequence of this prices varied very little. The speculator was completely eliminated. This was all very nice from the point of view of the user of the cotton, but the speculator looked at it from a different angle. So did the grower, who, had he been given a free hand during the war, could have gotten a much better price for his crop; and so did the middlemen, whom the government rendered superfluous in becoming the exporter itself. These influences have naturally been at work to secure the removal of government control and have at last succeeded.

Regarding the prospects in Egypt, Sir Murdoch MacDonald, Under Secretary of State in the Egyptian Ministry of Public Works, said some very interesting things in an address before the Council of the British Cotton Growing Association. He said that after thirty years of British occupation, the 2,000,000 acres at the delta of the Nile river had grown to 3,000,000 and that if the works already planned were carried through, this amount could be increased to 4,000,000 and perhaps to 4,800,000 acres.

In different portions of the 3,000,000 acres now under cultivation, there is a great difference in the intensity of cultivation. The portion known as the top zone, next to Cairo, yields six or even more cantars to the acre, the middle zone gives an average production of four cantars and the lower zone produces only from one and a half to two cantars an acre (1 cantar = 99.0492 pounds.) The lower zone would, however, produce as good a crop as the middle zone, if the irrigation and drainage in this section were as good as in other parts of the country. Realizing this, the government before the war, appropriated 2,500,000 pounds

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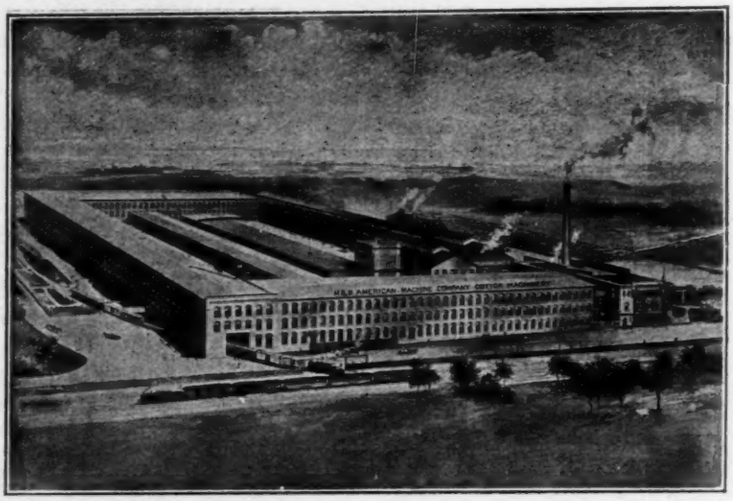
Opening and Picking Machinery

Card Room Machinery



Spinning Room Machinery

Twisters for Wet or Dry Work

With Band or Tape Drive

H. & B. AMERICAN MACHINE COMPANY
PAWTUCKET, R. I.

to be spent on the lower zone and although the war caused the work to be suspended, there is no intention on the part of the government of abandoning it. Urgent drainage work is to be done wherever the necessity arises.

In Upper Egypt, Sir Murdoch said, there were about 1,000,000 acres in summer crops and that it would be possible, by the building of another barrage in Middle Egypt, to irrigate from 500,000 to 600,000 more acres and increase the yield to that extent. The whole of the plans which were to be carried out would take many years to complete, but there is no reason, Sir Murdoch added, why a very great addition to the area under cultivation should not be made within the next few years.

In the Sudan there are approximately 3,000,000 acres—or feddans—in which good cotton can be grown. Experiments have been conducted here and have yielded results a little above the average for Egypt. Sir Murdoch said the government could not possibly deal with so large an area all at once, and therefore he had advised that it would be financially profitable to develop only about 300,000 acres. If he had been advising a commercial firm, and not the government, he said, he would have recommended taking up at least 1,000,000 acres.

It seems doubtful at the present time that the mission that was to go to the Far East and conduct an inquiry into the export of cotton and textiles into those markets from the United Kingdom will set out this year. The idea of sending this delegation originated in the Manchester and Blackburn Chambers of Commerce, who put it before the government departments concerned, as far back as last March. In May the plan was discussed by a conference representative of all the branches of the cotton trade, which was addressed by the British commercial attache at Tokio, and it was decided to ask the government to appoint the mission forthwith. The idea was that the whole thing should be carried out under the auspices of the government and at government expense, and a tour of at least nine months was contemplated. At the conclusion of this tour, the mission was then to report as to the best methods of preserving and extending the British cotton export trade in the Far East. However, the government, which at first encouraged the idea, seems to have done nothing to promote it. At any rate, the president of the Manchester Chamber of Commerce, Edwin F. Stockton, has written the Department of Overseas Trade, urging the government to come to a decision on the matter without delay so that the mission may be able to leave England not later than November. Mr. Stockton stated in his letter that the desirability of sending out the proposed mission was fully demonstrated at the May conference and adds: "In view of the extreme importance of our export trade, it appears to me to be essential that the government should without delay seize this opportunity of preparing for the development and extension of British trade in the Far Eastern markets."

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The J. L. Mott Iron Works, Trenton, N. J., announce the opening of their latest branch office, The Mott Southern Company, Atlanta, Georgia. A large stock of plumbing material will be maintained at this point and a complete showroom will make available for selection all types of plumbing fixtures. The services of men experienced in factory equipment are available for consultation or advice.

# Notes About Men You Know.

L. H. BROWN, the popular superintendent of the Brookside Mills at Knoxville, Tenn., is living at the Whittle Springs Hotel this summer and having lots of fun at the swimming pool. He hereby challenges any of his cotton mill friends to enter into a swimming match with him at this pool, for fun, money or marbles. Contestants should address him direct.

HENRY C. STEVENS, assistant cashier of the National Bank of Commerce in New York, and George W. Curtis, of its foreign department, have sailed to spend several months studying financial and economic conditions in Central Europe.

GEORGE W. FORRESTER has been appointed as manager of the traffic committee of the American Cotton Manufacturers Association, handling all general problems relating to rates and transportation difficulties affecting the textile mills of the South.

MAJOR JESSE T. CRAWFORD, one of the 30th Division boys, who returned to his home in Anderson, South Carolina, to become assistant superintendent at the Riverside and Toxaway Mills at Anderson, has been made superintendent of the Pendleton Cotton Mills at Pendleton, S. C.

ROYAL W. ALTREUTER has opened offices at 320 Broadway, Room 1019, New York, where he will conduct a cotton yarn brokerage business. For a number of years Mr. Altreuter has been associated with Converse and Company, New York, as manager of their cotton yarn department.

M. L. CHURCH, formerly secretary and treasurer of the Capitola Manufacturing Company, Marshall, N. C., has accepted a position with the yarn department of Catlin & Co., Charlotte, N. C.

ALLEN BARROWS, formerly assistant superintendent at the Holmes Manufacturing Co., New Bedford, Mass., recently tendered his resignation to accept a position with the Goodyear Tire & Rubber Co., at Akron, O. Mr. Barrows who served in the navy during the war, is a graduate of the New Bedford Textile School. On leaving his former position, he was presented with a handsome leather traveling bag and numerous other small articles.

HOWARD L. SMITH has resigned his position as overseer of the spinning and spooling departments of the Manville (R. I.) Mill, after six years service. He will be succeeded by Joseph Martineau, of North Adams, Mass.

W. D. THORNBURG has resigned as carder at the Cannon Mills, Concord, N. C., to become carder and spinner at the Edna Mills, Reidsville, N. C.

J. J. MCMANUS has accepted the position of master mechanic at Bearskin Cotton Mill, Monroe, N. C.

W. A. PRINCE has resigned as superintendent of Hamburger Cotton Mills, Columbus, Ga.

JOE S. HARRISON, of Covington, Ga., has joined the sales force of the Gulf Refining Co., Atlanta, Ga.

L. A. TRIPPE, superintendent of Gainesville (Ga.) Cotton Mills, died recently.

IRA HAYES has resigned his position as superintendent of the yarn department of the Whitman Mills, New Bedford, Mass. He was presented with a gold watch, chain and charm by his associates on leaving the plant.

GEORGE D. WOOLLEY, formerly overseer of weaving at the Bristol Manufacturing Company, New Bedford, Mass., has been promoted to superintendent of the weaving department of the same plant.

FRANK MOYER, who recently returned from overseas service, has become superintendent of the Eagle Knitting Mills Co., Leesport, Pa.

J. A. SORRELLS has been promoted to superintendent of the Gainesville (Ga.) Cotton Mills. He was formerly overseer of carding at the New Holland (Ga.) Mills.

L. G. HOOPER, formerly overseer of spinning, Cabarrus Mill, Kannapolis, N. C., has accepted the position of superintendent of the Johnston Manufacturing Company, Charlotte, N. C., succeeding J. B. Meacham, resigned.

GEORGE R. PEARCE, who has been engineer for the Edna Cotton Mills, Reidsville, N. C., for a number of years, has resigned his position and is now traveling for the Anglo-American Textile Machinery Company, Charlotte, N. C.

T. J. RUSH has accepted the superintendency of the Killebrew Manufacturing Company, Newton, Ala.

J. F. ALEXANDER has been elected superintendent of the Dresden Cotton Mills, Lumberton, N. C., succeeding W. B. Warren, resigned. Mr. Alexander was formerly at Marlboro Cotton Mills, McColl, S. C.

E. G. MADISON has resigned as spinning overseer at the Elk Mills, Dalton, Ga.

ERNEST NELSON, who has been in the South for some time, with the inspection department of the Maryland Casualty Co., has accepted the position of assistant superintendent of the Empire Cotton Mills at Welland, Ont., Canada. He was for five years designer at the Merrimack Manufacturing Company, at Lowell, Mass.

A. J. BAUMGARNER has accepted the position of superintendent at the Lloyd Cotton Mill, Mariposa, N. C. He was formerly carder at the Woodlawn Mill, Mount Holly, N. C.

WILLIAM A. GOSS has resigned as assistant superintendent at Hargrave Mills No. 1, Fall River, Mass., to become head of the department of carding and spinning at the Bradford Durfee Textile School, Fall River, Mass.

W. R. TATTERSALL, formerly superintendent of Loray Mills, Gastonia, N. C., has accepted the position of superintendent at Limestone and Hamrick Mills, Gaffney, S. C.

J. D. WHITMIRE recently became overseer of carding at Mills Manufacturing Company, Greenville, S. C. He was formerly with the Wallace Mills, Jonesville, S. C.

E. M. TAFT, JR., of the Lancaster Cotton Mills, Clinton, S. C., will be superintendent of a large new mill to be built in Walkerville, Canada, for the manufacture of overall cloth, according to a report.

I. W. BRIDGES has resigned from the superintendency of the Peck Manufacturing Company's plant at Warrenton, N. C.

CLYDE PANNELL has accepted a position at Georgia Cotton Mill No. 1, Griffin, Ga., as master mechanic, succeeding George W. Cox, resigned.

N. G. MAUNEY has accepted the superintendency of the Ozark (Ala.) Cotton Mills.

T. A. CASTON has been promoted from weaver to assistant superintendent in the Draper-American Mills, Draper, N. C.

BROWN MAHON has been elected vice president of the Judson Mills, Greenville, S. C., succeeding the late John M. Geer. Mr. Mahon is only twenty-one years of age, and this promotion places him among the younger higher cotton mill officials in the country.

T. M. WILLIS has resigned as overseer of carding at Elm Grove Mills, at Lincolnton, N. C., and accepted a position as second hand in carding at Woodlawn Cotton Mills, Mt. Holly, N. C.

J. B. BOWIE has resigned his position as overseer of weaving at Arkwright Mills, Spartanburg, S. C., to accept a similar one with Monarch Mills, Lockhart, S. C.

RICHARD COX has resigned as designer at the Altavista (Va.) Mills.

Y. L. YON has accepted the superintendency of Riverside Mill No. 6, at Danville, Va. Mr. Yon served with the 30th Division in France during the war.

PERCY C. WITHERS, former president and a charter member of the National Association of Hosiery and Underwear

THE LATE P. C. WITHERS.

Manufacturers, died recently at St. Luke's Hospital, New York, as the result of what was supposed to be a minor operation. Mr. Withers was 51 years of age at the time of his death. He was a prominent figure in the knit goods industry, being one of the active and influential members of the National Association. He was president and general manager of the Illnois Knitting Company, Mt. Vernon, Ill. He was buried in his home town, Elkhart, Ind.

PAUL F. HADDOCK, Southern manager for A. Klipstein and Company of New York, with Southern offices and laboratories at Charlotte, N. C., reports the addition of two new men to their Southern force. George W. Watson, formerly with Dicks, David & Co., is now traveling representative for the Klipstein Company, and Todd Misenheimer, of Charlotte, is now in charge of the Klipstein laboratory at Charlotte.

CAPTAIN ELLIOT W. SPRINGS, of Lancaster, S. C., was one of the forty contestants in the international derby of the American Flying Club of New York. The flight was begun at Roosevelt Field, Mineola, New York, and thirteen of the forty who started finished the next day at Toronto, Canada, after flying 1,000 miles. Captain Springs was third to start and was first to arrive at Syracuse. However, a little further on, he encountered engine trouble and was forced to land in a field. He was only slightly injured but his machine was badly damaged. He is a son of Colonel LeRoy Springs, head of the Lancaster Cotton Mills, at Lancaster, S. C.

BEN Y. LEE, who has resigned his position as instructor in cotton spinning and economics at the Nan Tung Textile College, Nan Tungchow, China, and accepted a position as textile engineer with Anderson, Meyers & Company, an American importing firm at Shanghai.

## Greenville's New Textile Supply House.

The Greenville Textile Supply Company, whose announcement appears in this issue, have started off in great shape and will soon be big factors in the textile supply trade.

This concern has organized with $100,000 capital and its stockholders are men who have ability and resources to make a big success of any undertaking. They have all lines carried in a modern textile supply house and unusual facilities for giving prompt and efficient service.

H. O. Wallace, the active manager, needs no introduction as he was manager of the Sullivan Hardware Company's Mill Supply Department for a number of years. His success there prompted him to organize the Greenville Textile Supply Company.

This company has secured the services of some very prominent and able mill supply salesmen who will soon be calling on the mills regularly.

Knowing Mr. Wallace and also those associated with him we feel sure they will have a success such as only true merit can bring.

The American Steam Conveyor Corporation, Chicago, in the latest folder put out by this concern asks its customers the question, "Have you ever counted the cost of moving ashes from boiler plant to bin or pile?" This folder is descriptive of the American steam ash conveyors made by this company.

# BLEACHERS!

The high cost of living hurts.

The common-sense way of increasing our income is to make more money for the boss.

If you turn out better bleached goods--with Peroxide--they will draw more trade and your value will have increased,

Your competitors are Peroxide-bleaching. If you don't, your output will fall off and your value will decrease,

Peroxide advice free to mills.

THE ROESSLER & HASSLACHER CHEMICAL COMPANY
NEW YORK, N. Y.

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MADE IN THE U. S. A. IMMEDIATELY AVAILABLE

**Able selling force with offices geographically located**

NEWPORT TRADE MARK

**An efficient industrial and technical organization**

**Every manufacturing step from coal to dyestuffs being performed by us.**

We manufacture an extensive line of colors, covering the entire textile field.

Uniform deliveries made possible by testing and standardizing every individual lot before shipment.

With no obligation on your part, our laboratories will match your samples and assist you in your dyeing problems.

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Milwaukee, Wisconsin.

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Boston, Mass. Philadelphia, Pa. Greensboro, N. C. Chicago, Ill.

# How Other Men Manage

## Practical Discussions by Cotton's Readers on all varieties of Mill Subjects

### "Wash" Answers "A. B. C."

EDITOR COTTON:

A. B. C. (N. J.) is some wizard. After reading his letter in the June issue of COTTON, I was convinced of this. It will be noticed he terminates his letter by stating, "I think 'Wash' should be more consistent when writing letters."

If "A. B. C." will send in his address, I will name the mill man who wrote the letter in question. This man is ready to tell "A. B. C." that he was greatly benefited. He states also that he discovered by removing the middle top roll that a much heavier hank could be used. He states, "I was using 5.50 hank, and I am running 4.50 hank with good results." The above is a good point for hosiery mills. If the statement of "A. B. C.," in the March issue of COTTON, that removing the weight from the middle top rolls gave no results is true, then there was something else radically wrong with the work.

The supposed letter was not received from a superintendent, as stated by "A. B. C.," and the mill man did not claim hard ends in the spinning room. Who ever heard of hard ends in the spinning room?

Get the January issue of COTTON. On page 165 I make the following statements: "I have in hand a letter from an agent of a large northern cotton mill as follows: 'We are running sample stock, the length of the staple varying from 1⅛ inches to 1¼ inches. We are having trouble with hard ends. This is the fifth week of a struggle with such conditions. As we know you to be a contributor to the textile press, we are asking you to suggest a remedy.'"

Nothing is said of hard ends in the spinning room.

If this man had told the writer he did not have weight on the middle rolls, I would have told him to resign his position, as he was not fit to be at the helm of a cotton mill. Nine times out of ten a too heavy finished drawing sliver is the cause.

When I made the statement, "It is a wonder the work ran at all," I had in mind the statement made by "A. B. C." in the March issue of COTTON, on page 291 where he said: "I then had the carder take the twist out of the roving until enough had been taken out to enable me to draw it properly."

But why did he not have the carder do that before he read my January letter? Evidently I did "A. B. C." some good.

Then "A. B. C." states "the roving I had reference to did not have extra twist put in as 'Wash' would like to have us believe." Then why did he have the carder take the twist out? Read his letter in the March issue.

Some short stock will take twist better than long stock, but no stock will twist itself. The direct result of changes in humidity and temperature is a corresponding change in the amount of moisture hygroscopically contained in fibers exposed to it, which in turn effects a consequent and relative change in their physical condition; these physical changes are mainly in the nature and amount of the twist in individual fibres, and in the extent of their brittleness or pliability as the case may be, and not by the length.

Wash (N. H.)

### A Suggested Marking for Reeds.

EDITOR COTTON:

The warp in the loom should not be too wide on the beam for the harness. Three to six inches wider than the harness should be the limit.

A wide warp will cause too much strain on the yarn at the sides, and although they may weave, they are likely to give lots of trouble, and have a tendency to make ragged selvages. The same can be applied to the reed. The reed is the most misunderstood part of the loom, and most of the misunderstanding can be traced to the marking of the reed.

For instance, let us assume that a mill is changing over to another style of goods which calls for a less number of dents than the style used but the reed must be the same length over all.

For illustration, before the change, the mill was using a reed 45½ inches over all, 30 dents to the inch, making a total of 1350 dents on 45 inches. We change the reed to one which calls for 24 dents to the inch on 43 inches. Now the point I wish to make is, that the reed maker will mark the above reed 1032-43. As stated above, the reed must be the same length, and the reed in this case must have 1080 dents on 45 inches. To eliminate any possibility of misundertanding, the above reed should be marked 1032-43 EX. 45-1080, which would mean 1032 dents on 43 inches extended to 45 inches, 1080 dents.

This is a pointer for the makers of reeds as well as the manufacturers of cloths that would prove a great convenience.

Wash (N. H.)

### Grinding and Setting Cards.

EDITOR COTTON:

I am going to take for my example the Whitin card. After we have the card set up and leveled, the next process is grinding, first with the "dumb" roll, or in other words, the roll we use for grinding the flats. Put this on the doffer and cylinder and let it run for a couple of days, or until all the wire points become level. This roll should grind rather heavy as we are using it more to smooth up the wire than to put on a point.

After taking this roll off, put on the traverse rolls. These should also be kept on for two or three days until the card becomes good and sharp and we have a good point on the wire. After these rolls are taken off, the card should be cleaned well and then we are ready to begin setting up.

A newly clothed card should not be set as close as one that has been ground several times, on account of a few high wires which will not be ground down the first time over.

Following are given some settings for a newly clothed card which I believe are all right. Set back stripping plate to cylinder to a No. 17 gauge. Set the front stripping plate at top to a No. 17 gauge, at the bottom to a No. 20 gauge; licker-in screen to No. 17 gauge; mote knives as follows: bottom knife to No. 10 gauge; top knife to No. 12 screen to cylinder to No. 17 gauge at back and to a No. 20 gauge at front; doffer to cylinder to No. 10 gauge, tight; gauge; feed plate to licker-in to No. 12 gauge; cylinder stripping comb to doffer to No. 12 gauge; stripping comb flats to No. 12 gauge. Set the flats to the cylinder to No. 10 gauge all the way around. I believe that with these settings a card will go off like a top and give the best results possible.

Now we have the card ready to run. After getting all the belts and bands on and the card well oiled, the next point is to keep the card in good shape all the time. I believe a card should be ground at least every twenty days to keep it sharp. We should never grind cards to *sharpen* them but should always grind them to *keep them sharp.* Never let cards become dull. Before grinding see that cards are kept well cleaned and oiled all the time and have the card hand keep his eye on the laps and never let a tail end of a lap get into a card, as this not only damages the card but also knocks the settings out of place. Never let the cans run full enough to stretch the sliver or to break off a head.

Grind flats one card ahead of the traverse rolls and in this way it is easy to keep the flats in good shape. Set the flats up the first time you grind over and the back of the card the next time over. By the back of the card I mean the mote knives, the licker-in, the feed plate and the licker-in screen.

If these few rules are followed, no trouble should be had in getting the card to work properly and secure the best results all the time. I hope what I have said will be of benefit to some grinder who is having trouble with his cards.

Ted (N. C.)

## A Pioneer Machine and Tool Industry.

The names of Joseph R. Brown and Lucian Sharpe are closely associated with the invention and manufacture of the universal milling machine; the universal grinding machine; the vernier and micrometer calipers and the interchangeable system of involute gearing with formed cutters for producing same.

These men built up a great industry, at the foundation of which lie these and many other inventions, which America, and, later, the world, have utilized as factors to bring about the phenomenal advance which has taken place in mechanical trades within the memory of living men.

The Brown & Sharpe business had its inception during the first half of the last century, in a small clock and watch business, conducted in Providence, Rhode Island, by David Brown and his son, Joseph R. Brown. It was not until 1850 that steps were taken by Joseph R. Brown to branch out in pioneer work directed to raising the standard of accuracy in machine shop operations. In that year Mr. Brown built an automatic linear dividing engine, which as far as known was the first put into use on this side of the Atlantic, and entered on the manufacture of standard rules for machinists' use. The next year he brought out the vernier caliper reading to thousandths of an inch which, for the first time, made it possible for accurate measurements to be made in the every-day work of the machine shop. This was followed a few years later by the manufacture of micrometer calipers, these two tools being of the greatest value in making possible the production of high-grade interchangeable work.

Another line of manufacture early taken up was in making appliances for measuring and weighing yarn. Also the making of screw and wire gauges; the American wire gauge, having the sizes vary in a regular progression, being an original product of this company, and one in the production of which Lucian Sharpe had a large share.

Lucian Sharpe, who had served an apprenticeship with Joseph R. Brown, became his partner in 1853, and from that time on, the business prospered, agencies being established, and the products widely advertised. Mr. Sharpe's executive and business ability showed out strongly from the start.

In 1866, Samuel Darling, of Bangor, Maine, who had commenced the manufacture of steel rules soon after Mr. Brown, formed a partnership with Brown & Sharpe, and in 1868 moved his plant to Providence, this part of the business being conducted under the name of Darling, Brown & Sharpe, until January 1st, 1892, when Mr. Darling's interests were bought out, and the entire business was soon after conducted under the name of the Brown & Sharpe Mfg. Co., the old firm of J. R. Brown & Sharpe having been incorporated under that name in 1868.

The demand for a large increase in manufactured products led to a great expansion and to many inventions. Among the most important of these was the invention by Mr. Brown of the universal milling machine. This was brought out in 1861-2.

Following the invention of the universal milling machine, plain milling machines, of the column type, were designed and both these and the manufacturing type have become part of the regular line since carried. From these beginnings the demand for milling machines has increased, until now there are 38 kinds and sizes manufactured by the Brown & Sharpe Co., besides numerous attachments and accessories.

Connected with the invention of the milling machines was that of the formed cutter, which can be sharpened without changing its form, also Mr. Brown's invention, this being an important step in the production of accurate cut gears, as well as for general manufacture.

As early as 1855, J. R. Brown & Sharpe had built a precision gear cutting machine, having gone to great pains to have this machine of a high degree of accuracy, and in connection with their gear work they took an important part in establishing the standard system of interchangeable involute gearing, which has since become so universally adopted.

This company commenced the manufacture of turret screw machines in 1861, and has added many important inventions to increase its usefulness. These were followed by more fully organized screw machines, leading up to the fully automatic machine of the present day. The invention of the automatic machine has made it possible to produce an infinite variety of small parts aside from screws not only in great quantities, but also to a high degree of accuracy.

The universal grinding machine was evolved from crude beginnings for the purpose of grinding hardened sewing

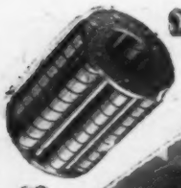
# Of Interest To Cotton Manufacturers

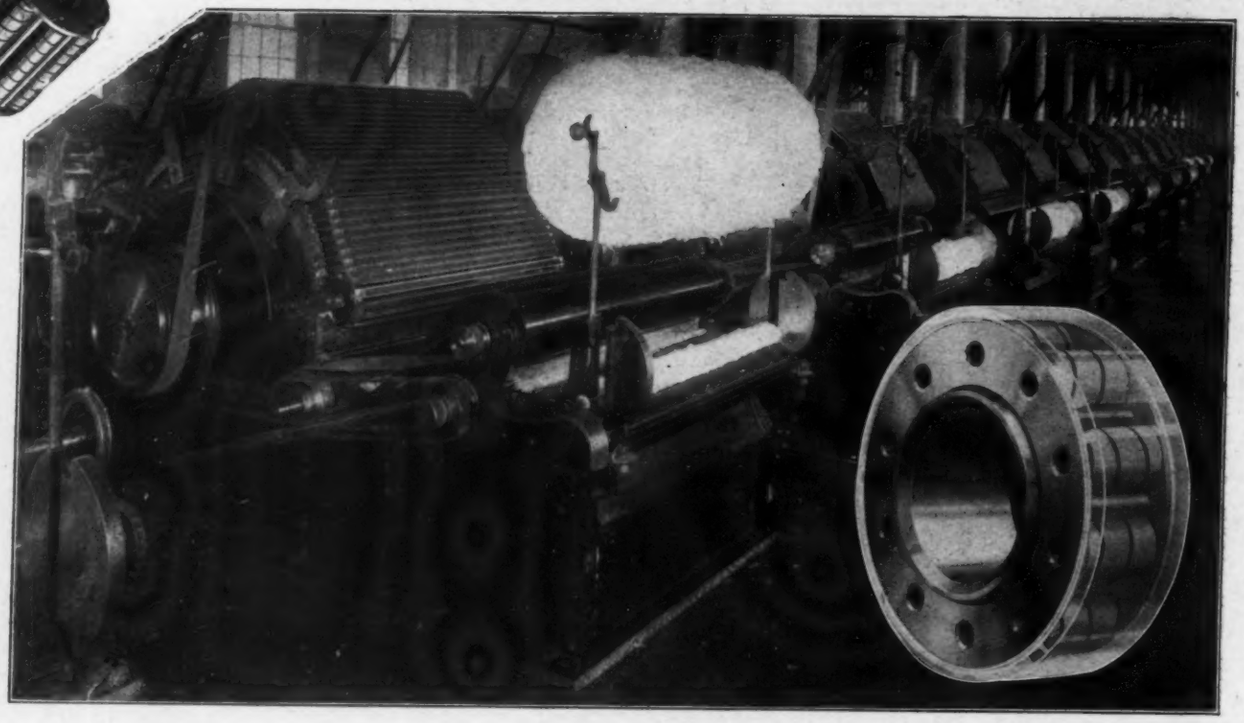
Every cotton manufacturer who is interested in securing increased production at decreased costs will find it well worth his while to investigate the many advantages of Hyatt Roller Bearings for cotton machinery.

Increased production is the most logical way for the mill owner to meet the large advance in labor costs.

The use of Hyatt Roller Bearing equipped cotton machinery will not only increase production, but will also result in worth while savings in power and lubricant costs, give a smoother operating machine and eliminate bearing replacements.

The following pages show the many advantages of Hyatt Roller Bearings for the various types of cotton machinery, as well as the savings which they effect on transmission lines. These pages contain information of value to all progressive cotton manufacturers.





# For Economical Card Operation

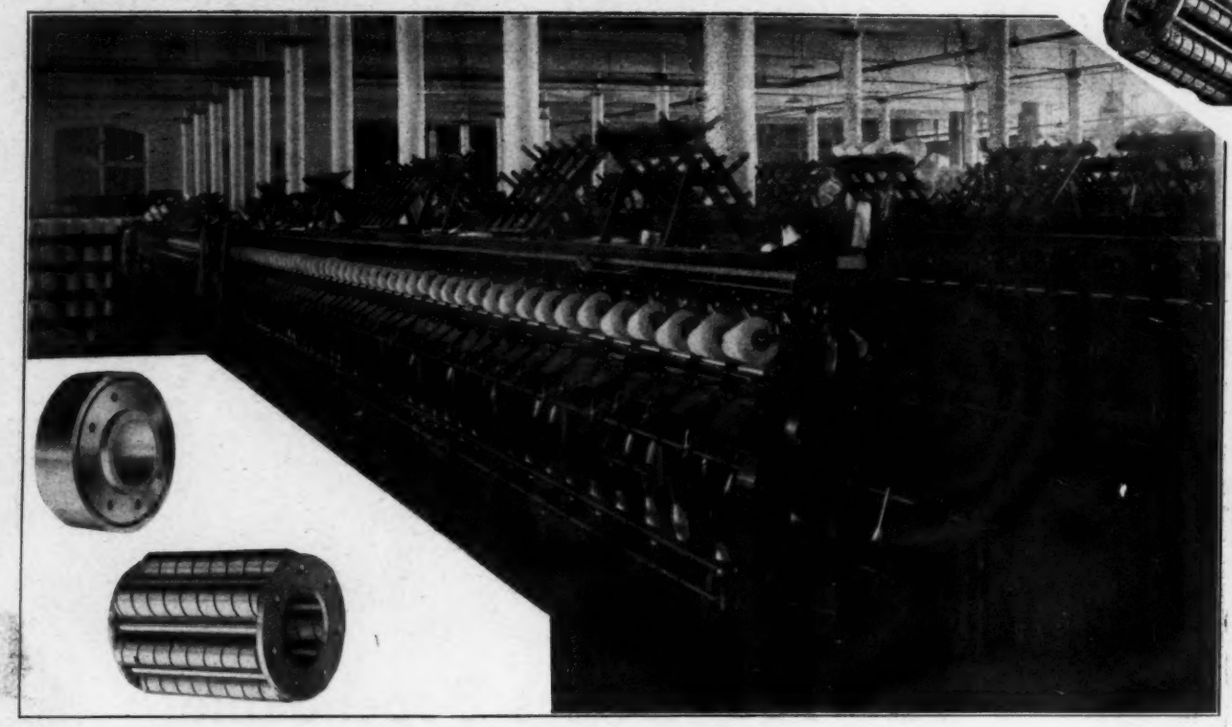
The rugged, durable construction of Hyatt Roller Bearings enables them to operate satisfactorily for years with no appreciable wear. Speaking in terms of the life of the machine on which they are used, Hyatt Roller Bearings are practically permanent bearings.

This durability of Hyatt Roller Bearings is of considerable importance in securing economical card operation. They accurately maintain the close limits necessary between the cylinder clothing and the flat clothing for an indefinite time. The frequent renewals which make bronze bushings so expensive to maintain are entirely eliminated.

The peak power load in card operation occurs during the starting up period while static friction is being overcome and the heavy parts of the card accelerated to operating speed. Easy starting Hyatt Roller Bearings, by eliminating the dragging friction of plain bearings reduce by at least 25% the acceleration power required.

A Hyatt equipped card requires lubrication only five or six times a year and therefore operates with a minimum of lubricant and attention.

# HYATT BEARINGS FOR



# 13% Power Saving on This Winder

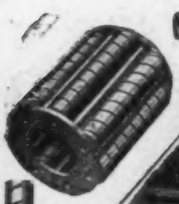
There are six Hyatt Roller Bearings on the Foster Cone Winder shown above. This Hyatt equipped winder was tested against a similar plain bearing winder at the Nyanza Mills, Woonsocket, R. I. The two machines were each loaded with an equal number of full cones of No. 26 single yarn and were driven alternately by the same motor, with the same belt tension.

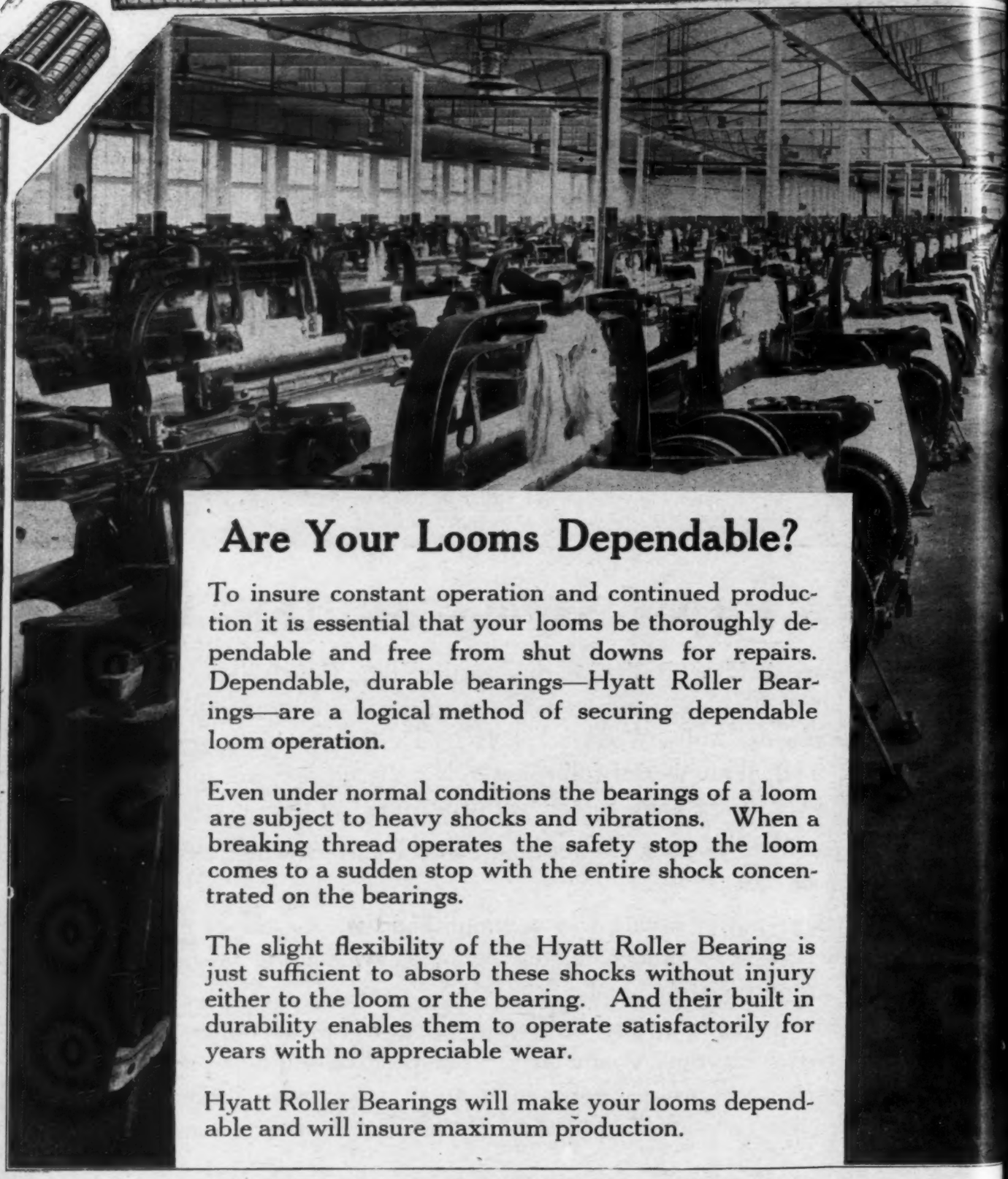
The results of this test showed that **Hyatt Roller Bearings effected a power saving of 13%.**

This large power saving was accomplished with the use of only six Hyatt Roller Bearings—on a completely equipped winder the saving would have been proportionately greater.

Due to the speed at which the head bearings of a winder operate, plain bearings frequently run hot and stick. The positive, self-oiling action of Hyatt Roller Bearings insures proper lubrication at all times, absolutely eliminating trouble from sticking bearings.

# COTTON MACHINERY





## Are Your Looms Dependable?

To insure constant operation and continued production it is essential that your looms be thoroughly dependable and free from shut downs for repairs. Dependable, durable bearings—Hyatt Roller Bearings—are a logical method of securing dependable loom operation.

Even under normal conditions the bearings of a loom are subject to heavy shocks and vibrations. When a breaking thread operates the safety stop the loom comes to a sudden stop with the entire shock concentrated on the bearings.

The slight flexibility of the Hyatt Roller Bearing is just sufficient to absorb these shocks without injury either to the loom or the bearing. And their built in durability enables them to operate satisfactorily for years with no appreciable wear.

Hyatt Roller Bearings will make your looms dependable and will insure maximum production.

# HYATT BEARINGS FOR

## Some Advantages of HYATT Equipped Looms

**INCREASED PRODUCTION**—The use of Hyatt Roller Bearings makes it possible to speed up the loom, increasing the number of picks per minute, so that a greater yardage is turned out per day.

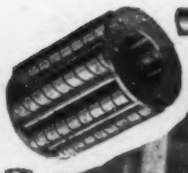
**IMPROVED FABRIC**—Smooth, easy running Hyatt Roller Bearings greatly reduce thread breakage thus improving the quality of the finished product.

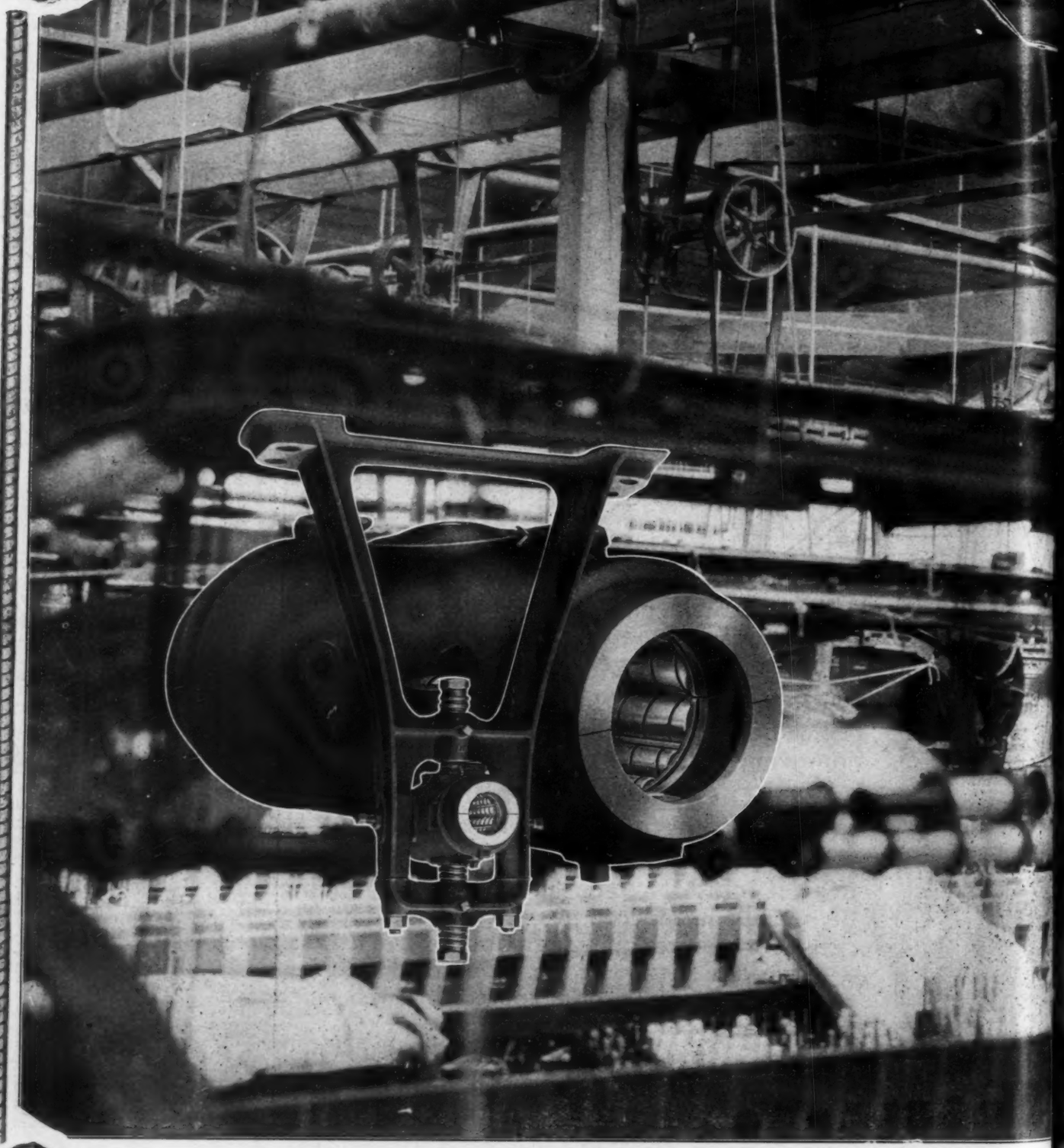
**EASY TO OPERATE**—A Hyatt equipped loom is easily turned over by hand, greatly facilitating the work of the weaver.

**ECONOMICAL**—Reduced starting and running friction results in reduced power costs. A Hyatt equipped loom requires oiling only four or five times a year—reduced lubrication costs. Durable Hyatt bearings operate for years with no appreciable wear—reduced maintenance costs.

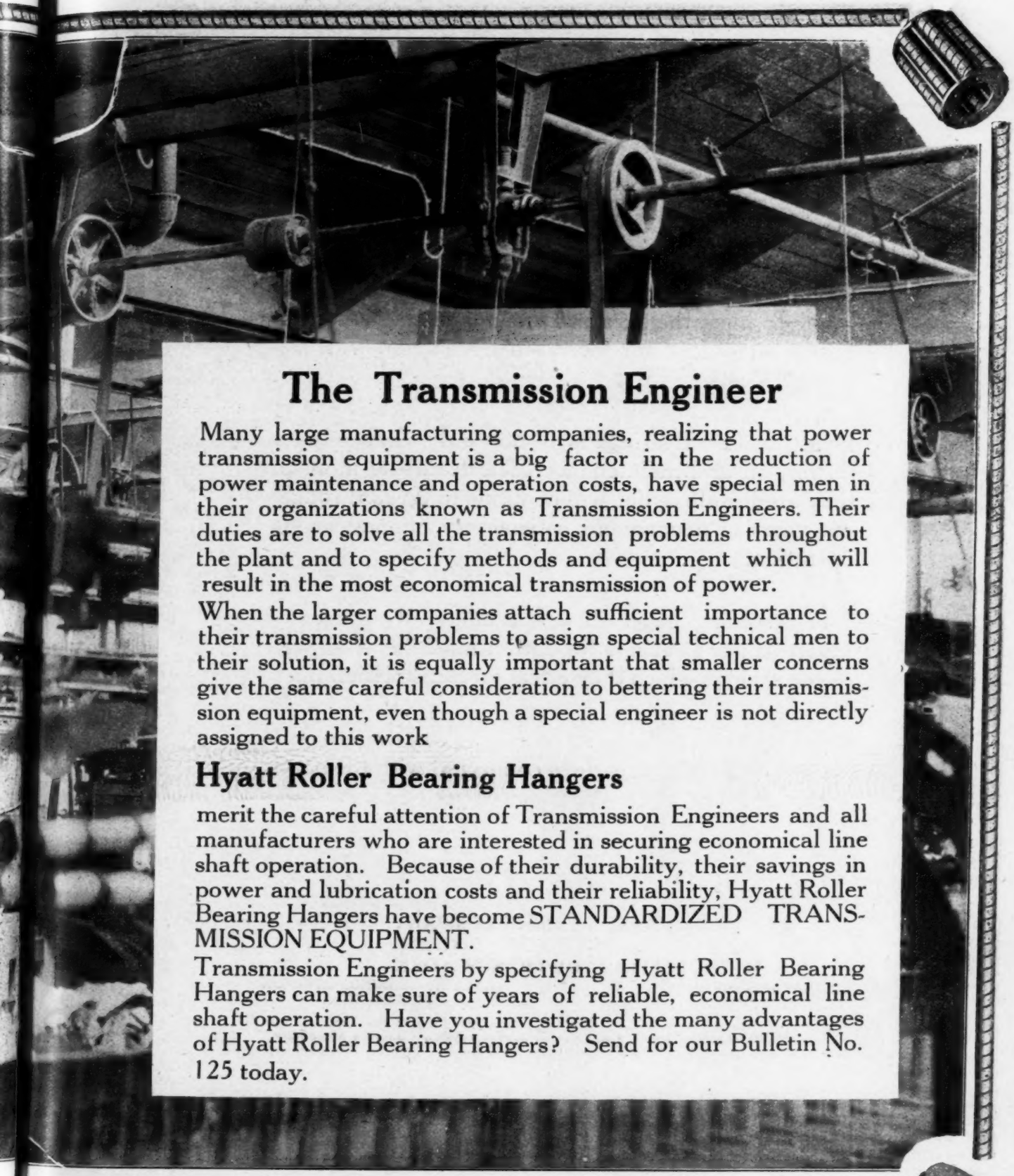
**For Increased Production with Decreased Costs specify Hyatt Roller Bearing equipped looms.**

# COTTON MACHINERY





# HYATT BEARINGS



# The Transmission Engineer

Many large manufacturing companies, realizing that power transmission equipment is a big factor in the reduction of power maintenance and operation costs, have special men in their organizations known as Transmission Engineers. Their duties are to solve all the transmission problems throughout the plant and to specify methods and equipment which will result in the most economical transmission of power.

When the larger companies attach sufficient importance to their transmission problems to assign special technical men to their solution, it is equally important that smaller concerns give the same careful consideration to bettering their transmission equipment, even though a special engineer is not directly assigned to this work

## Hyatt Roller Bearing Hangers

merit the careful attention of Transmission Engineers and all manufacturers who are interested in securing economical line shaft operation. Because of their durability, their savings in power and lubrication costs and their reliability, Hyatt Roller Bearing Hangers have become STANDARDIZED TRANSMISSION EQUIPMENT.

Transmission Engineers by specifying Hyatt Roller Bearing Hangers can make sure of years of reliable, economical line shaft operation. Have you investigated the many advantages of Hyatt Roller Bearing Hangers? Send for our Bulletin No. 125 today.

# FOR LINE SHAFTS

The use of Hyatt Roller Bearings on all types of cotton machinery is the most logical way for cotton manufacturers to meet the present demands of the cotton industry which call for Increased Production with Decreased Costs.

Hyatt Roller Bearings will not only reduce your power, oil and maintenance costs from the moment they are installed, but will continue to do so throughout years of dependable, satisfactory, money saving operation.

The preceding pages show the many advantages of Hyatt Roller Bearings for cotton machinery, as well as the savings which they effect on transmission lines.

Our Engineers are at your service at any time regarding the engineering features connected with the application of Hyatt Roller Bearings to your equipment.

**HYATT ROLLER BEARING COMPANY**
**INDUSTRIAL BEARINGS DIVISION**
**METROPOLITAN TOWER, NEW YORK**

**MOTOR BEARINGS DIVISION**
**DETROIT, MICH.**

**TRACTOR BEARINGS DIVISION**
**CHICAGO, ILLS.**

***Manufacturers of Bearings for Mine Cars, Ore Cars, Steel Mill Cars, Roller Tables, Trolleys, Cranes, Hoists, Machine Tools, Line Shafts, Countershafts, Concrete Machinery, Textile Machinery, Conveyors, Lift Trucks, Industrial Trucks, Railway Service Cars, Storage Battery Locomotives, etc.***

machine parts. This gradually developed into the full universal grinding machine completed by Mr. Brown shortly before his death, which occurred on July 23rd, 1876.

Automatic gear cutting machines first brought out in 1877, have since been developed until a full line for cutting bevel and spur gears is being made at the present day.

One of the important fields of endeavor with which the name of this company has been closely associated is in the making of standards. The masters from which commercial standards are made have been produced at a great expenditure of time and money. These are the standard screw lathe, cutting screws within a guaranteed limit of less than .0004 inches error in a foot; measuring machines reading to .00001 inches, and based on linear standards made with great care and which have been compared with the Government standards at Washington; circular dividing and index drilling machines, etc.

It is of especial interest to southern readers to note that the Seeger-Walraven Company of Atlanta has been made the sole agents and distributors of the machine tools made by Brown & Sharpe Mfg. Co., for the states of Georgia and South Carolina. A very complete stock of the small tools made by this company will also be carried.

## Union Cotton Warehouse Corporation Plans.

(*Continued from page* 790.)

cotton, several notable things will be accomplished, both making for improved conditions in the cotton trade and the stabilization of cotton prices. The smaller farmer, also, will be benefited by being able to carry his cotton over a period of depressed prices. The grower or shipper, when storing cotton in a bonded warehouse under government control, would obtain a receipt which would be excellent collateral in case it was desired to hold the cotton for a better market. Such a receipt, being negotiable and guaranteeing the weight, could be converted into cash at any time or in any place. Spot cotton could be dealt in between persons entirely unknown to each other and rejections would cease. The southern producer would have everything to gain and nothing to lose by the proposal. The spinner would likewise benefit by the guarantee but his chief gain would be the large supplies of cotton assembled at concentration points thus insuring him against a scarcity of raw material, due to winter transportation difficulties and other obstacles. Last and not least bankers would be supplied with a large amount of the most liquid and highest grade paper—acceptances on cotton.

Warehouse companies for the storage of merchandise, and discount corporations for handling commercial acceptance paper are comparatively unknown in America, the principle upon which both rest coming from England. That nearly all properly conducted public storage warehouses are successful is a fact too well known to be enlarged upon. The United States has fully demonstrated this fact.

Discount corporations are, however, a newer innovation in this country. To illustrate the success that attends the operation of such corporations in Great Britain it is but necessary to say that, in the case of the National Discount Company of London, the dividend for 1918 was raised to 11½ per cent from 11 per cent in 1917. In 1918 the concern earned $250,000 while $236,000 was carried to the surplus account. The directors of Alexander's Discount Company declared a 12 per cent dividend and a bonus of a shilling a share, which was free of income tax. The Union Discount Company of London carried forward $600,000 at the end of 1918 and paid a 14 per cent dividend in the course of the year. The dividend rate was the same in 1917, and $580,000 was the company's undivided balance at the close of that year.

## Designs for Fancy Cotton Fabrics.

(*Continued from page* 793.)

The upper and lower solid marks correspond to those in Fig. 208. The diagonals indicate the lifting of face threads over ground picks in order to keep the two cloths separate at the desired places. Each filling interweaves only with its own warp in the so-called pockets, and the two are bound together at these points represented by the solid marks. The stitching process, coupled with the types of yarn, accounts for the depression or the pulling down of the face cloth and thus gives the characteristic feature to these fabrics.

The draft on 7 harnesses is indicated at N, Fig. 209, while the weaving plan is shown at O on 7 by 24. In the finished state the cloth contains: 94 threads per inch of face and 47 threads per inch of ground and is equal to 141 threads per inch. 174 picks per inch of face and 87 picks per inch of ground is equal to 261 picks per inch.

The great number of picks per inch compared with threads per inch accounts, as already stated, for the compression of the diamond figures in the longitudinal or vertical direction.

(*To be continued.*)

The National Aniline & Chemical Company, Inc., recently announced the production of two new dyes, known as Niagara Blue G Conc. and Sulphur Brown 3 R.

Niagara Blue G Conc. is a direct color practically indentical with the pre-war type, Benzo Azurine G. It is fairly fast to light, good to washing, and fast to organic acids. An after-treatment with copper sulphate renders the shade somewhat greener, but materially increases its fastness to light and washing. Because of its level dyeing properties, good solubility and rich shade, Niagara Blue G Conc. will find extended use in the dyeing of all classes of cotton material.

Sulphur Brown 3 R is similar in shade and properties to the pre-war color, Katigene Red Brown. It possesses a good fastness to light, washing and organic acid. In shade it is reddish brown and can be after-treated with chrome bluestone and acetic acid. The after-treated shade is bluer and duller than the self shade. Because of its fastness to acid cross dyeing, ths color is suitable for the dyeing of warps for such classes of material as plushes and union goods.

The education of a cotton mill man should include knowledge of things other than textiles.

Some men should be very careful about giving advice—some one might take it.

# An Industrial Housing Fence —made "Boy Proof"

An Anchor Post Chain Link Woven Steel Fence has been developed that meets every Industrial Housing requirement.

It is strong enough to withstand the bangs, blows, kicks and "hard usage" that may result from the activities of the average small boy.

It is durable and protected from the destructive forces of time and the elements by a thick coating of spelter which covers the fence in all of its parts.

It is held rigid and erect by firmly anchored posts—it cannot sag, lose its alignment, nor collapse.

Anchor Post Chain Link Woven Steel Fence has been endorsed and adopted by architects and others who have to do with the planning of towns and industrial communities. It is used by the U. S. Government and private corporations in all parts of the country.

Advice on Industrial Community Fencing is offered—it may help you with your problems.

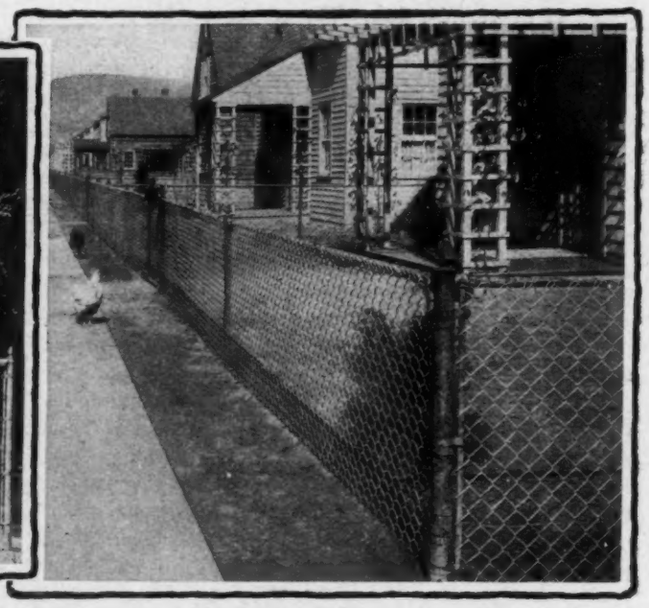
**An Anchor Post Factory Fence Keeps Out Undesirables**

Too high to scale, too smooth to climb, too strong to break down, this fence provides the most efficient form of protection against trespassers. Our catalog fully describes it.

## Anchor Post Iron Works

**Atlanta, Ga., Office—Empire Bldg.** **New York Office—167 Broadway**

Philadelphia, Pa., Real Estate Trust Bldg. Cleveland, O., Guardian Bldg.
Hartford, Conn., 902 Main St. Boston, Mass., 79 Milk St.
Chicago, Ill., Edison Bldg. 2259-G



# Anchor Post Fences

## Handling the Occasional Export Inquiry.

BY L. W. ALWYN-SCHMIDT.

The American cotton industry has just arrived at that point where it no longer requires the exclusive exertion of our manufacturers to obtain foreign trade, but where orders are coming in unsolicited. Naturally the largest part of this kind of trade flows to the big export houses which have done a good deal of foreign trade development during recent years and, therefore, are well known in their markets. But the manufacturer who has done little development work of his own also is bound to get some foreign business occasionally.

Just before the outbreak of the war several American cotton houses appeared in the English market and their methods and goods received much attention from the English and English colonial dry goods trade. The system employed by these firms was of course strictly American. They were advertising on a large scale and they were especially strong on dealers help. Their traveling salesmen went over the market not with the intention of selling their products but rather of introducing the service rendered by these firms to their customers. A good deal of educational advertising was also done. Fast colors was the talking point of one of these firms and quality the argument of another. These points were impressed upon the public and women in England began to ask for the goods in the draper stores, which in England take the place of our dry goods stores. As a result the American representatives of these firms found it easy to book orders. But the location of these houses in London was another advantage. From London their fame spread all over the English colonies, especially those which could not be easily reached from the United States.

Doing export business on the scale used by the factories in question necessitates the outlay of a great deal of capital. The cost of keeping a vast export organization tuned up for a large turnover is naturally very great and is justified only if the manufacturer intends to sell a large part of his production abroad. There are very few cotton factories in the United States and for that in the world, which are large enough to take care of an organization of that character. The most of the factories rely on the home market and will handle export business only as a side line. Just these, however, are the connections which are principally desired by the importer in other countries. A great number of import houses, say in South America or elsewhere, do not patronize the large manufacturing concerns running their own foreign distribution agency. They are little interested in the giant concern selling a certain staple at fixed rates. What they require for their particular trade is individuality in supply. They need the service of a factory turning out a few good lines for their own home market of which they will sell reasonable quantities abroad. The big cotton goods trade of France and Germany was built up on this kind of commerce, while England has supplied principally staple goods. The American manufacturers will have to follow the example of the European manufacturers and their methods. They have been well tried out and have met with the approval of the importers.

The average importer of textiles in any market is always on the lookout for novelties. He imports in bulk and sells to the dry goods stores of his acquaintance. Each connection needs special attention and the retailers rely on the importer for new designs. This is the reason why importers like to get into touch with a great number of manufacturers buying the new designs of all.

How can their wants be best supplied by the manufacturers of our country? Dealing with the occasional export inquiry is not always easy for a factory not specially equipped for foreign trade. The office staff does not know how to handle these inquiries and probably would not know what to do with an order when it has arrived. Anyhow, an attempt should be made to secure the orders and every manufacturer likely to get some foreign business should have some sort of a routine organization to handle it. The following system has been used with great success in many factories, and is recommended, as it can be easily applied to conditions in the textile industry.

It must be left to the judgment of the manufacturer whether his letters to his prospective customers shall be translated into the language of the customer or written in English. Every importer as a rule, knows a little English. It may not be much, but it may carry him through a business letter. So the letter may go in English and it may be stated in it that unfortunately the writer does not write the language of his correspondent, but trusts that the recipient knows some English. If he should answer in his own language the correspondence could be carried on quite satisfactorily. But even if the letter be written in English, all the other matter sent with the letter should be in the language of the customer. The reason for this is that, while the letter may be understood by one member of the firm the samples will probably be handled by other men not knowing English, and therefore, all printed matter going with the samples, should be translated into the language of the importer.

A very good plan is to have a series of two or four page leaflets as required, say in Spanish, Portuguese and French

## DID IT EVER STRIKE YOU THIS WAY

"Humidifying" the Textile Mill means "keeping the air moist enough," as most Mill Men understand it.

"Drying" anything means "removing all or part of its contained moisture," as most Engineers understand it.

"But "drying," like "humidifying" is the *result* desired,—and there are, of course, many different *methods* of attaining that result.

One of those methods is the *best* method. It is a method which, being founded on a broader conception of the problem itself, accomplishes more than the single result which the word "humidifying" conveys.

If the *best* method of humidifying and conditioning the Textile Mill is a matter of interest to you, I'll be more than glad to send you my new book "Weather,—And the Story of How it is Manufactured." The book contains an interesting, understandable, story of Manufactured Weather, in the Textile Mill, and in dozens of other Industries.

*Write right now!*

Yours to make

"Every day a *good* day."

*The Mechanical Weather Man*

**Carrier Engineering Corporation**

**39 Cortlandt Street,**
**New York City**

---

**Offices at**
**Boston**
**Buffalo**
**Chicago**
**Philadelphia**

ready to be used in answering such inquiries. These leaflets have on one page short introductory remarks, as to the sales methods, quality of goods, conditions, etc. On the other pages space is provided for a description of the samples which go with the offer, all matter being translated into the foreign language.

Such a leaflet can be filed with the samples by the recipient and can be referred to easily by anyone in his employ. The production and translation of a four page leaflet is not an expensive matter and a large number of each can be held in stock for use when required. Under present circumstances an inquiry concerning an export order may come into the office of a manufacturer any day and he should be prepared to answer it promptly.

Handling foreign trade, when once acquired, is not so difficult in this country today as it was formerly. The facilities provided by our banks and shipping houses are so improved that even the manufacturer of the smaller class can do some export business without too much trouble and risk to himself. A chat with one's manager will soon settle any doubts about how the credits should be handled and the local express manager can give information about the routing of the goods. And there is always the customer to fall back upon. Importers are the most obliging people alive. As they have an interest in getting their goods as ordered and in time for their season, they are always willing to give the most explicit directions as to the way of shipping, packing, etc. These hints should be followed to the minutest detail. The manufacturer who does this has not only the satisfaction that he pleases his customer but also that he throws the responsibility on him, if anything should go wrong.

There is no doubt that a greater interest will have to be taken by our smaller factories in foreign trade than in the past. Everything, therefore, that can be done to attract foreign trade in the direction of the medium size and small cotton mills deserves the support of all interested in the development of export trade in American cotton goods.

What now can a manufacturer do to attract this kind of export inquiries? The best answer to this question is, to make himself well known in the home market. The importer abroad naturally will turn to firms with a good reputation in their own market for supplies, the names of which he finds as a rule in the advertising columns of the commercial press.

Many manufacturers abstain from advertising in the trade press of their country because they think either that they are too well known or that their particular trade is not reached by these magazines. They may be correct as to their contention as far as the home market is concerned, but they should not forget that advertising in the commercial press now has a distribution which reaches all over the world. The American journals, well known for their excellent contents, are read by importers and merchants in all countries. The American consulates keep many American commercial journals on file, and most of them can be consulted in the libraries of the big cities of other countries. The importer abroad, who desires to get into touch with a few American manufacturers, as a rule will consult the commercial press. He will do so at the office of the consulate or he will write to the American publishers for sample copies. He will then make his selection from the advertising pages. Hence the value of the advertisement for the manufacturer.

Foreign manufacturers have known this power of their home press for a long while, and there are many firms advertising in the commercial journals, who say in their advertisements that they supply export trade only. As a rule this means that the manufacturer has a home trade selling agreement with a national firm and is free to supply directly outside their own country only. The American manufacturers should copy this practice from their European competitors. It is a good means of attracting the occasional foreign order and it has the great advantage of not adding materially to the advertising expense. All that is required are a few words prominently displayed in the advertisement, saying that the firm is able to execute export orders and that these will be given prompt attention.

## Lovingood Company Increases Office Space.

Owing to the fact that their business has shown such an appreciable increase in the last few months, the Lovingood Company, Atlanta, Ga., manufacturers' representative for a number of well known brands of shipping room supplies, have been forced to move their uptown offices from 306 Peters building to 506 of the same building.

The warehouse at 62 Castleberry street has not been moved, but it is expected that in a very short time it will be necessary to either increase its capacity or else move to a larger and more commodious building.

Alvin Lovingood, president and treasurer of the company, in discussing the business conditions, stated that he had been very much gratified with the success his company had attained so far, and that he attributed much of it to advertising, in which he is a firm believer. He said that he had every reason to believe that it would constantly increase with the future months.

Mr. Lovingood also stated that more and more concerns who had long been troubled with shipping room problems were beginning to see the advantages of modernizing their facilities by installing labor and time-saving devices, as well as guaranteeing that their parcels would reach their destination as they left the shipping room.

The Lovingood Company handles many nationally known lines, such as the Signode nailless strapping system, McKinney one-man trucks, gummed kraft tape, Cowan elevating trucks, and others. Mr. Lovingood said that business had been particularly brisk on the McKinney truck, stating that they were taking hold in splendid fashion with Atlanta firms and also many in the southeast.

The Lovingood Company employs a number of salesmen to handle their extensive city trade and travel the southeast.

Of interest to the manufacturers of Georgia and the surrounding territory is a notice recently issued from the office of W. W. Croxton, general passenger agent of several railroad lines operating in Georgia and neighboring territory concerning an act passed recently in the Georgia legislature, changing that standard of time within the state of Georgia. According to the notice, this act does not affect the operation of the trains of the A. B. & A., C. & W. C., A. & W. P., W. R. of A., and Georgia railroads. It is announced that these lines will continue to operate trains under U. S. Standard time, as heretofore.

# Both Stand for LOWER WEAVING COSTS

*"Scientific Lubricants for Scientific Lubrication"*

TODAY, more than ever, the big problem of the textile industry is to cut weaving costs. The best mechanical skill in the country is devoting itself to the task of designing time-saving textile machinery. The great Stafford Automatic Loom pictured above, which is said to save 50% to 60% in weaving costs, is an example of modern textile machinery efficiency.

Hand in hand with the development of textile machinery, the Swan & Finch Company has, by an intensive study of textile requirements, placed the lubrication of textile machinery on a scientific foundation. Through the use of Slo-Flo No. 25, a high grade, non-throwing loom lubricant, a machine such as the Stafford loom is made to operate at maximum efficiency. Slo-Flo is the correct lubricant for any type of loom, but it is particularly appropriate for looms built on the basic idea of cutting weaving costs—because Slo-Flo itself is manufactured with the same end and aim.

By eliminating the stained goods loss—by cutting out needless wear and replacements—and by reducing the friction-burden, Slo-Flo effects a very material lowering of weaving costs.

Superintendents of some of the biggest textile mills will testify to the savings made possible through the use of Slo-Flo.

***Ask our nearest Distributors for Free Sample or write us direct.***

DISTRIBUTORS

Fulton Supply Co., Atlanta, Ga.
Textile Mill Supply Co., Charlotte, N. C.
Carolina Supply Co., Greenville, S. C.

Chicago
Philadelphia
Hartford
Providence

SWAN AND FINCH COMPANY
NEW YORK

Quality Lubricants Since 1853

## Sanitation in the Modern Factory.

(*Continued from page* 800.)

of these is one made of solid porcelain glazed, and equipped with a porcelain nozzle which discharges the water at an angle so that water which comes in contact with the mouth of user cannot fall on the nozzle. The stream can be regulated to any desired height by means of a needle regulator with which the nozzle is provided. The self-closing lever handle valve on the supply pipe assures the turning off of stream immediately after use, the waste and supply pipe of this fountain is concealed in the pedestal, thus there are no unsightly pipes to mar its pleasing appearance or require constant cleaning.

Cuspidors are a necessity which in the past has been greatly neglected. While it is not unusual to see signs posted around factories, "Do not spit on the floor," no provisions have been made to assist the workmen to obey. The writer has seen some of these signs on which some mischievous wag had written "Spit on the wall," making the sign read, "Do not spit on the floor, spit on the wall." Now while the employer had no such idea in mind when he posted this notice, yet this little incident should have awakened him to the fact that if he wished to be obeyed he should provide a proper receptacle for this purpose.

There are many types of cuspidors in use, most of which are decidedly unsanitary. A good type for factory use is one made of vitreous porcelain which has a flushing rim connected to the water supply, and with a waste connected with the soil pipe system of the building, the waste pipe should of course be trapped. While this type of cuspidor might at first thought seem expensive, a little investigation will prove that this is not the case as only a few of these will be required on each floor in convenient locations, and, being connected with the water supply, they are constantly being flushed, they require very little care, the saving in attendant's time, together with the cost of disinfectants which would otherwise be required were the old type to be used, will greatly reduce the first cost. The second choice would be a vitreous porcelain cuspidor partly filled with a disinfecting solution such as biehloride of mercury. These should be cleaned daily and refilled with the solution.

In many states the law makes it compulsory that an emergency aid room be provided and maintained in large establishments. This law has been strengthened by the workman's compensation law which has been adopted by many states. This law makes the employer liable for all accidents and the results of such accidents; first aid measures, therefore, may not only prove a humanitarian act, but a good investment.

The floor and walls of the emergency aid room should be tiled, the size of the room and the equipment necessary will depend on the number of employees and the kind of materials produced. This room should also be an outside room, well ventilated and have plenty of light. In selecting the tile for this room it would be well to choose a glazed tile for the walls and unglazed tile or vitrified brick for the floor. All joints between wall and floor should be rounded, i. e., the so-called sanitary base and cover should be used in the construction of this room. The equipment of this room should consist of a reclining couch, hand basins, examination table, water and instrument sterilizers, instrument and medicine cabinets and a good type of surgeon's wash up sink or lavatory with knee action or foot action supply valves and waste connection. The type of fixture would of course depend on whether it is desired to locate it at the wall or free in the room. Fig. 9 illustrates an ideal arrangement. Such a room should also be provided with office facilities for the doctor or nurse. Connected with the emergency aid room there should be provided a rest room where the injured or sick employees may rest or be examined before first aid can be applied.

## Ginner Delegates.

(*Continued from page* 864.)

TEXAS

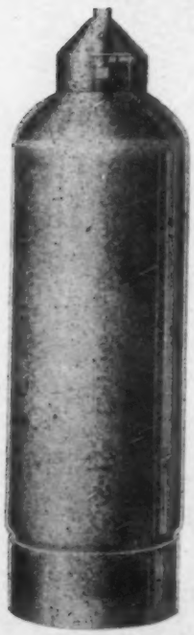
J. M Cunningham, Celina
I. A. Daniels, Crocket
Thomas B. Darst, Richmond
John H. Davis, Paducah
Edward Day, Bellinger
J. H. Duckworth, Clay
T. G. Duncan, Matador
Oscar Dunigan, Paris
Walter Fairman, Godthwaite
J. H. Farler, Ridgeway
Otto Feick, Victoria
Charles Fischer, Cuero
Hermann Fischer, Fischers Store
John Fogle, Marshall
John T. Fortson, Rice
S. S. Frazier, Dallas
W. H. Fuqua, Erwin
Dewitt Furrh, Elysian Fields
W. W. Goodwin, Grow
George Hagn, Seguin
J. S Hall, Beeville
J. C. Harris, Eustace
Joseph Hausmann, LaGrange
John Hicks, Marion
G. W. Hill, Trenton
J. T. Hollbrook, Sinton
Andrew Jackson, Enloe
T. P. Jones, Kenedy
H. L. Kight, Dubin
T. T. Kizer, Cooper
C. Kornegay,
D. C. Latimer, Vessey
L. T. Lewis, Quanah
W. L. Luck, West Point
Henry Lumblad, Georgetown
Edward Maggard, Emhouse
O. M. McDonald, Brownwood
Al McFadden, Victoria
E. F. McShan, Mabank
Z. L. Meetze, Commerce
John Meisch, Clarksville
G. C. Mick, Iago
M. Micles, Bishop
J. C. Pound, Lake Creek
W. S. Pratt, Cooper
W. R. Quarles, Ackworth
John D. Rogers, Navasota
J. S. Rogers, Coleman
M. Rogers, San Diego
T. O. Rowland, Wingate
Murdock Royal, Athens
H. Seay, Tombean
William Seidel, Brenham
J. H. Shell, Gregory
W. A. Shirley, Venus
Louis Siebel, Carmine
J. D. Simpson, Santa Anna
Joseph P. Silvey, Clarksville
A. H. Smith, Martindale
F. B. Smith, Martindale
J. F. Smith, Gunter
John T. South, Wilmer
H. M. Starnes, Leander
S. B. Starr, Odell
J. B. Salyer, Jonah
James Thompson, Annona
M. E. Thrasher, Turkey
W. H. Trout, Rowland
M. L. Vaughn, Georgetown
C. F. Wageuschier, Falfurrias
Clarence Walker, Memphis
George D. Walker, Willis
W. C. Watkins, Hedley
J. E. Webb, Weesatche
Dabney White, Tyler
J. W. Williams, Paris
A. L. Williamson, Rochelle
L. J. Womack, Marshall
E. E. Wood, Childress
C. E. Woods, Lodonia
J. L. Yoakum, Cooper

VIRGINIA

J. L. Ivey, Emporia
T. J. Whitefield, Suffolk
Samuel H. Winfield, Stony Creek

E. H. Jacobs Manufacturing Company, Danielson, Conn., manufacturers of loom supplies, have recently issued a 48 page catalog in which are illustrations of their various products. The catalog is printed on heavy glazed paper and is made into an attractive booklet. A special reproduction process, which eliminates all artists' distortions and shows actual illustrations of the finished product, was used in the composition of the catalog. A new feature employed in this edition of the catalog is a small pocket placed on the inside of the back cover, in which, for the convenience of the buyer, may be placed the price lists of the company as they are changed from time to time. The company will gladly furnish a copy of the catalog to any weaving mill on request.

# COMMERCIAL ACETYLENE



## EVERY COTTON MILL
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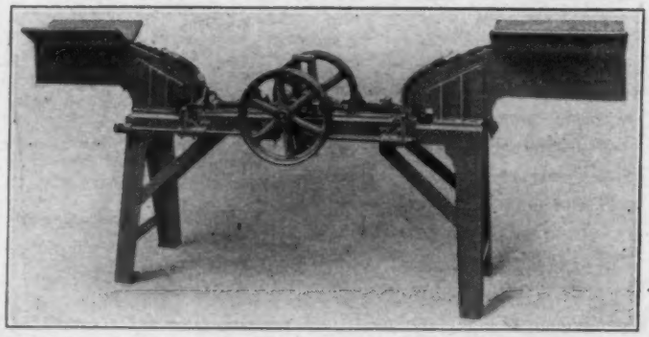

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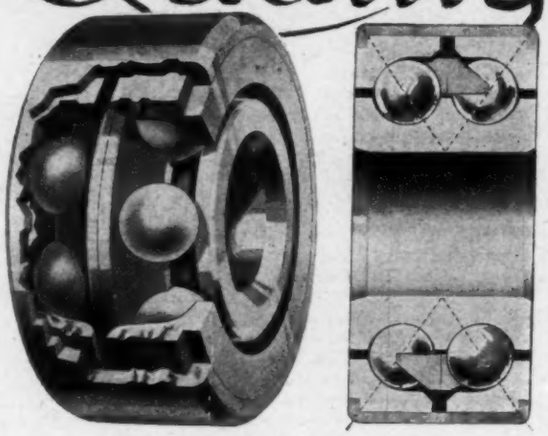

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Frank S. Jones, Race Track Plantation, Greenwood

NEW YORK CITY

Herbert D. Martin, Dunlap Press Company
Paul S. Jones, 2 Rector Street
William C. Chase, 71 Broadway, Room 1312

TENNESSEE

General S. T. Carnes, 811 Falls Building, Memphis
John W. McGrath, Mary Mac Plantation Co., Memphis

TEXAS

N. O. Blackwell, Cotton & Cotton Oil News, Dallas
Hon. S. J. Brookes, San Antonio
H. L. House, Lockhart
D. E. Lyday, President Farmers Union, Fort Worth
A. B. Slack, Houston

## Compress Delegates.

ALABAMA

James B. Ellis, Dallas Compress Co., Selma
F. L. Latthews, Attalla Compress Co., Attalla
W. D. Nesbitt, Warrant Warehouse Co., Birmingham
J. C. Webb, Mgr., Railway & River Cotton Warehouse Co., Demopolis

ARKANSAS

W. A. Coolidge, Manager Helena Compress Co., Helena
J. G. Knight, Manager Citizens Compress Co., Helena

GEORGIA

T. E. Fugate, Secretary Macon Bonded Warehouse Co., Macon
Colonel G. A. Gordon, Pres. Savannah Warenouse & Compress Company, Savannah
W. O. Jones, Elberton Cotton & Compress Co., Elberton
Thomas Nesbitt, President Cordele Compress Co., Cordele

LOUISIANA

Thomas Chrieton, President Minden Compress Co., Minden
R. Farma, Vice-President Columbia Compress & Warehouse Co., Shreveport
Dr. W. D. Haas, Pres. Alexandria Compress & Warehouse Co., Alexandria
S. W. Litchenstein, President The Opelousas Compress Co., 922 Gravier Street, New Orleans
B. C. McElroy, Louisiana Compress Co., Shreveport
John P. Parker, Standard Compress & Warehouse Co., Monroe
G. D. Seay, Shreveport Compress & Warehouse Co., Shreveport

MISSISSIPPI

F. J. Duffy, President, Natchez Compress & Warehouse Co., Natchez
A. S. Gilbert, Manager, Amory Compress Co., Amory
F. Z. Jackson, Attalla Compress & Warehouse Company, Kosciusko
W. M. Priestly, Rosedale Compress Co., Rosedale
R. E. Rowland, Treasurer, New Albany Compress Co., New Albany
E. C. Smith, Brookhaven Compress Co., Brookhaven

G. A. Wilson, President, Greenwood Compress & Storage Co., Greenwood

MISSOURI

Joseph W. Lewis, St. Louis Cotton Compress Co., St. Louis

NORTH CAROLINA

W. B. Cooper, Milton Compress & Warehouse Co., Wilmington
William R. Sprunt, Alexander Sprunt & Son, Wilmington

SOUTH CAROLINA

W. H. Jeffords, Vice-President Columbia Compress Co., Columbia
L. W. Lively, Piedmont Bonded Warehouse Co., Greenville
W. Gordon McCabe, Jr., W. Gordon McCabe Co., Columbia

TENNESSEE

R. L. Taylor, General Manager Grenada Compres Co., Memphis
W. G. Turner, Vice-President Memphis Terminal Corp'n, Memphis

TEXAS

Charles L. Grunder, President Victoria Compress & Warehouse Co., Victoria
Roland Jones, President Nacogdoches Compress Co., Nacogdoches
G. H. Truebrood, Memphis Compress Co., Victoria

VIRGINIA

John H. Rogers, President Norfolk Warehouse Corp'n, Norfolk

## Banker Delegates.

ALABAMA

C. B. Allen, First National Bank, Ashland
A. F. Armstrong, President Marion Central Bank, Marion
H. C. Armstrong, President City National Bank, Selma
J. M. Atkins, President Bank of Heflin, Heflin
A. M. Baldwin, First National Bank, Montgomery
D. B. Barnes, President First National Bank, Eutaw
J. B. Barnett, Monroe County Bank, Monroeville
H. T. Benton, First National Bank, Seale
E. W. Berry, President Camden National Bank, Camden
J. A. Blunt, President First National Bank, Greensboro
L. A. Boyd, President First National Bank, Elba
W. H. Boynton, President Isbell National Bank, Talladega
W. T. Callen, President Peoples Savings Bank, Clanton
W. W. Campbell, President Macon County Bank, Tuskegee
M. V. Capps, President First National Bank, Abbeville
E. P. Chapman, President Bank of Grove Hill, Grove Hill
J. Michael Cody, President Exchange National Bank, Montgomery
J. H. Cranford, President First National Bank, Jasper
A. B. Dabbs, President Bank of Carrollton, Carrollton
W. J. Dansby, President Choctaw Bank, Butler
W. F. Davis, President Columbiana Savings Bank, Columbiana
C. P. Deming, Peoples Bank, Evergreen
A. H. Dobbs, Bank of Carrollton, Carrollton
J. C. Dubois, Jr., Asheville Savings Bank, Asheville
G. P. Dowling, President First National Bank, Ozark
Thomas Edwards, President First National Bank, Union Springs
N. C. Elting, President First National Bank, Florence
A. A. Fendley, President Blount County Bank, Oneonta
W. B. Folmar, W. B. Folmar & Sons, Troy
W. W. Fussell, Tennessee Valley Bank, Decatur
C. D. Glaze, President Farmers & Merchants Bank, Athens
James D. Granade, Chatom State Bank, Chatom
A. M. Grimsley, President First National Bank, Fayette
A. M. Grimsley, Bank of Vernon, Vernon
W. W. Haley, President Traders & Farmers Bank, Haleysville
William J. Hall, President First National Bank, Greenville
W. G. Halsey, President Colbert County Bank, Tuscumbia
T. E. Henderson, President American Bank & Trust Company, Opp
Clyde Hendrix, President Tennessee Valley Bank, Decatur
J. B. Hodges, Marion County Banking Company, Hamilton
A. Hohenberg, President First National Bank, Wetumpka
E. T. Hollingsworth, President Gadsden National Bank, Gadsden
J. W. Hunnicutt, President Peoples Bank, Centerville
C. B. Hunt, President First National Bank, Scottsboro
J. K. Jackson, V.-P. American Trust & Savings Bank, Birmingham
J. J. Johnson, President Citizens Bank, Geneva
E. F. Ladd, President Merchants Bank, Mobile
G. Scott Leath, Leath National Bank, Cullman
G. H. Malone, Bank of Daleville, Daleville
G. H. Malone, President First National Bank, Dothan
W. B. McLain, President Bank of Rockford, Rockford
Frank S. Moody, President First National Bank, Tuscaloosa
A. Northington, President First National Bank, Prattville
C. C. Prince, Bank of Moulton, Moulton
O. B. Pruett, President Clayton Banking Company, Clayton
N. P. Renfroe, President First National Bank, Opelika
W. R. Rhodes, President First National Bank, Linden
A. L. Rison, President W. R. Rison Banking Company, Huntsville
J. L. Savage, Cherokee County Bank, Centre
L. S. Schuessler, President Bank of LaFayette, LaFayette
W. D. Stapleton, Baldwin County Bank, Bay Minette
J. C. Swann, President Bank of Wedowee, Wedowee
T. M. Tart, President McMillian & Company, Livingston
C. E. Thomas, President Autauga Banking & Trust Co., Prattville
W. H. Weatherly, President First National Bank, Anniston
C. E. Wilson, Citizens Bank & Savings Co., Russellville
G. B. Zettler, President Citizens Bank, Guntersville

ARIZONA

R. E. Moore, Vice-President Valley Bank, Phoenix

ARKANSAS

H. C. Argo, President First National Bank, Cotton Plant
George H. Bell, Cashier Planters Bank & Trust Co., Nashville
T. F. Booker, Cashier Miller Bank & Trust Co., Texarkana
B. A. Brown, Cashier Pocahontas State Bank, Pocahontas
J. E. Bryan, Cashier Arkansas Valley Bank, Ozark
J. F. Carson, Cashier Citizens & Miners Bank, Yellville
J. L. Center, Cashier Bank of Waldron, Waldron
D. O. C. Clevealnd, Cashier Citizens Bank, McGehee
H. C. Covington, Ass't Cashier Arkansas Trust Co., Hot Springs
George B. Cox, Cashier Farmers & Merchan.. Bank, Malvern
H. P. Cruce, Cashier Drew County Bank, Monticello
Z. B. Curtis, Vice-President Union & Mercantile Bank, Little Rock
C. W. Dixon, Cashier Citizens Bank, Mammoth Springs
Parker Ewan, Vice-President Merchants & Planters Bank, Brinkley
A. N. Falls, Cashier Farmers Bank, Dardanelle
Frank Farris, Cashier Farmers State Bank, Conway
R. L. Fish, Cashier Lincoln County Bank, Star City
C. S. Fitzpatrick, Vice-President Interstate National Bank, Helena
A. D. Foster, Cashier Merchants & Planters Bank, Pine Bluff
Brad Fraser, Cashier Van Buren County Bank, Clinton
M. H. Frayser, Cashier, Merchants & Planters Bank & Trust Co., Harrisburg
James M. Gilliam, Cashier Planters Bank & Trust Co., Forrest City
H. F. Grigsby, Cashier Hempstead Bank & Trust Company, Hope
D. H. Hamilton, Cashier Cross County Bank, Wynne
R. D. Harris, Cashier Bank of Melbourne, Melbourne
J. W. Hawkins, Cashier Bank of Lamar, Lamar
S. B. Hawkins, Cashier Farmers & Merchants Bank, Mulberry
Charles G. Henry, President Arkansas Bank & Trust Co., Newport
C. W. Hogan, Cashier First National Bank, Stuttgart
K. E. Holliman, Cashier, Bank of Glenwood, Glenwood
Carl Hollis, Cashier Merchants & Planters Bank & Trust Co., Warren
A. T. Hudspeth, Cashier First National Bank, Marshall
F. T. Hunter, Cashier First National Bank, Fordyce
W. C. Johnson, President Arkansas National Bank, Heber Springs
H. M. Kennerly, Cashier Citizens Bank & Trust Co., Batesville
A. A. Lancaster, Cashier Bank of Mountain View, Mountain View
P. T. Lewis, Cashier Grant County Bank, Sheridan
James E. Lightle, Vice-President Union Bank & Trust Co., Searcy
Charles Long, Cashier Bigelow State Bank, Bigelow
E. J. Loop, Cashier Baxter County Bank, Cotter
J. T. Magruder, President First National Bank, Mena
L. B. McClure, Cashier Peoples Exchange Bank, Russellville
L. D. McCown, Cashier Bank of DeQueen, DeQueen
W. N. Metcalf, Cashier Bank of Evening Shade, Evening Shade
E. E. Mitchell, President Citizens Bank, Morrillton
Hugh Mixon, Cashier Bank of Marianna, Marianna
T. A. Monroe, Cashier Peoples Bank, Magnolia
Brooks Montgomery, Cashier Citizens Bank & Loan Co., Lewisville
C. L. Moore, Jr., Cashier Citizens Bank, Osceola
J. W. Moore, President Newton County Bank, Jasper
H. A. Morrison, Cashier Bank of Commerce, Earl
J. E. Parr, Cashier Bank of Jonesboro, Jonesboro
E. C. Payne, Cashier Arkansas State Bank, Ashdown
W. S. Pettit, Cashier Citizens Bank, Harrison
Leonard Powell, Cashier Merchants & Planters Bank, Camden
F. Pugh, Cashier Farmers Savings Bank & Trust Co., Hamburg
J. C. Richardson, President Lawrence Company, Bank, Walnut Ridge
Albert Rowell, Cashier First National Bank, El Dorado
L. C. Sadler, Cashier Bank of Paris, Paris
M. F. Scott, Cashier Bank of Benton, Benton
H. C. Sellmeyer, Cashier Bank of Knobel, Knobel
John B. Sims, V.-P. Chicot Bank & Trust Co., Lake Village
C. S. Smart, Cashier Merchants National Bank, Fort Smith
Lloyd Spencer, Asst. Cash. Merchants & Planters Bank, Arkadelphia
William Watkins, Cashier Montgomery County Bank, Mt. Ida
J. A. Welty, Cashier Peoples Bank, DeValls Bluff
C. N. Wheeler, Vice-President Cleveland County Bank, Kingsland
E. H. Wood, Cashier Bank of Hampton, Hampton
H. W. Woolsey, Cashier Bank of Commerce, Paragould
W. H. Young, Cashier Lonoke County Bank, Lonoke

CALIFORNIA

Frank B. Anderson, President Bank of California, San Francisco
Herbert Fleischacher, Anglo & London-Paris National Bank, San Francisco
C. H. McCormick, V.-P. First National Bank, San Francisco

COLORADO

H. J. Alexander, President First National Bank, Denver
George B. Berger, President Colorado National Bank, Denver

GEORGIA

C. A. Addington, President First National Bank, Lavonia
D. C. Alford, Hartwell Bank, Hartwell
J. P. Applewhite, President Bank of Millen, Millen
A. W. Ashford, President Oconee County Bank, Watkinsville
R. J. Atkinson, Greenville Banking Co., Greenville
J. R. Bachlott, President Bank of Camden County, St. Mary's
J. E. Barr, President Cornelia Bank, Cornelia
P. D. Bedingfield, President Exchange Bank, Wrightsville
Miller S. Bell, Milledgeville Banking Co., Milledgeville
T. R. Bennett, President Bank of Camilla, Camilla
L. O. Benton, President American National Bank, Cordele
A. C. Blalock, President Bank of Jonesboro, Jonesboro
William R. Bowen, President Exchange National Bank, Fitzgerald
J. A. Bowers, President Baker County Bank, Newton
J. H. Boykin, President Farmers State Bank, Linconton
L. M. Brand, Brand Banking Co., Lawrenceville
Hoyt Brannon, Farmers & Citizens Bank, Dawsonville
A. P. Brantley, Blackshear Bank, Blackshear
J. S. Calhoun, President First National Bank, Cartersville
H. G. Cannon, Citizens Bank, Cairo
G. H. Carswell, Irwinton Bank, Irwinton
S. M. Clark, President Bank of Louisville, Louisville
E. D. Clary, Bank of Columbia County, Harlem
J. A. Coleman, President Citizens Bank, Swainsboro
J. L. Coleman, President Bank of Statesboro, Statesboro
P. H. Comas, President Baxley Banking Co., Baxley
J. F. Cook, Farmers Bank, Glenwood
E. W. Copelan, President Copelan National Bank, Greensboro
F. G. Corker, President First National Bank, Dublin
E. P. Davis, President Citizens Bank, Warrenton
F. H. Davis, Georgia Bank & Trust Co., Cuthbert
W. H. Davis, President First National Bank, Waynesboro
R. G. Dickerson, President Bank of Homerville, Homerville
W. O. Donovan, President First National Bank, Vidalia
John T. Duncan, President Douglasville Banking Co., Douglasville
J. E. Dunson, Jr., La Grange Banking & Trust Co., La Grange
W. F. Durrence, Glenville Bank, Glenville
F. S. Etheridge, President Atlanta Trust Company, Atlanta
A. J. Evans, President Citizens Bank, Fort Valley
E. B. Exell, President Middle Georgia Bank, Eatonton
W. H. Ferguson, President Bank of Gibson, Gibson
H. M. Franklin, President Farmers & Merchants Bank, Tennille
R. W. Freeman, President First National Bank, Newnan
P. F. M. Furr, President Atkins National Bank, Maysville
J. P. Ghoston, President Comer Bank, Comer
N. L. Gillis, President Bank of Soperton, Soperton
J. A. Glover, President Exchange National Bank, Rome
C. S. Grice, President Claxton Bank, Claxton
W. C. Hamilton, President Bank of Vienna, Vienna
L. G. Hardman, Northeastern Banking Co., Commerce
R. L. Harp, Bank of Cusseta, Cusseta
W. W. Heaton, President Citizens Bank, Waco
J. F. Henderson, Bank of Newton County, Covington
J. W. Hinson, President Bank of Hazlehurst, Hazlehurst
R. A. Hinton, Reynolds Banking Co., Reynolds
John F. Holden, President Bank of Crawfordsville, Crawfordsville
Robert Holmes, President Bank of Sparta, Sparta
W. C. Horton, Pres. North Ga. Trust & Banking Co., Winder
C. B. Hudson, President Bank of Rockdale, Conyers
T. C. Jeffords, President Sylvester Banking Co., Sylvester
N. A. Jelks, President Planters Bank, Hawkinsville
B. F. Johnson, First National Bank, Thomson
R. T. Jones, President Bank of Canton, Canton
G. Gunby Jordan, President Columbia Savings Bank, Columbus
A. J. Keith, President Bank of Chatsworth, Chatsworth
R. T. Kenimer, White County Bank, Cleveland
W. D. Kennedy, President Bank of Metter, Metter
J. N. King, Bank of Rochelle, Rochelle
R. H. Kingham, Sr., President Bank of Gray, Gray
H. Kirkland, Citizens Bank, Douglas
A. J. Kitchens, President Bank of Heard County, Franklin
P. R. Kittles, President National Bank of Sylvania, Sylvania
Mills B. Lane, President Citizens & Southern Bank, Augusta
R. D. Leonard, President Bank of Dallas, Dallas
Charles B. Lewis, President Fourth National Bank, Macon
E. B. Lewis, President First National Bank, Montezuma
J. F. Lewis, President Citizens Bank, Valdosta
J. A. Lipsey, President Bank of Leesburg, Leesburg
J. H. Longino, President Fairburn Banking Co., Fairburn
Robert F. Maddox, Atlanta National Bank, Atlanta
D. G. Malloy, President First National Bank, Quitman
L. C. Mandeville, President First National Bank, Carrollton
J. E. Massey, President First National Bank, Marietta
M. E. Maxwell, President First National Bank, Elberton
W. T. McArthur, President Mount Vernon Bank, Mount Vernon
E. L. McGee, Bank of Roberta, Roberta
V. H. McQuarrie, Bank of Alma, Alma
N. McQueen, Liberty Banking Co., Ludowici
E. E. Mitchell, President Farmers & Merchants Bank, Toccoa
Julius Morgan, Pembroke National Bank, Pembroke
J. A. Moss, President National Bank of Wilkes, Washington
W. W. Murphy, Bank of Ringgold, Ringgold
J. P. Nichols, President Griffin Banking Co., Griffin
James A. Ottwell, Farmers & Merchants Bank, Cumming
George A. Paulk, President Bank of Alapha, Alapha
M. J. Paulk, President Flint National Bank, Ocilla
C. H. Peacock, President Citizens Bank Co., Eastman
J. P. Peacock, President Cochran Banking Co., Cochran
E. J. Perry, President Bainbridge State Bank, Bainbridge
R. T. Persons, President Farmers Bank, Forsyth
T. H. Persons, Peoples Bank, Talbotton
J. K. Pray, President Citizens First National Bank, Albany
Jacob Phinizy, President Georgia Railroad Bank, Augusta
J. C. Pruitt, President Citizens Bank, Gainesville
S. Y. Pruitt, President Upson Banking & Trust Co., Thomaston
C. J. Rambo, Bank of Edison, Edison
J. D. Richardson, President Farmers Bank, Simpsonville
George D. Rucker, President Milton County Bank, Alpharetta
R. L. Saville, President Dawson National Bank, Dawson
B. F. Scott, President Citizens Bank, Folkston
J. C. Shannon, President Twiggs County Bank, Jeffersonville
James P. Shattuck, President Bank of La Fayette, La Fayette
J. W. Sheffield, President Bank of Commerce, Americus
Joseph S. Sherman, President First National Bank, Blakely
W. A. Shingler, President Ashburn Bank, Ashburn
G. W. Sims, President Bank of Weston, Weston
T. A. Sloan, President First National Bank, McDonough
E. M. Smith, President First National Bank, Thomasville
H. B. Smith, President Bank of Lumpkin County, Dahlonega
H. P. Smith, Pearson Banking Co., Pearson
O. N. Starr, President Calhoun National Bank, Calhoun
J. H. Stevens, President Bank of Ellaville, Ellaville
A. M. Stewart, President DeKalb County Bank, Decatur
C. O. Summers, President Citizens Bank, Barnesville
Samuel Tate, President Pickens County Bank, Jasper
H. H. Tift, President Bank of Tifton, Tifton
Paul B. Trammell, President First National Bank, Dalton
E. O. Veal, Farmers Bank, Crawford
W. C. Vereen, President Moultrie Banking Co., Moultrie
J. Vinson, Bank of Fort Gaines, Fort Gaines
B. S. Walker, President Bank of Monroe, Monroe
J. L. Walker, First National Bank, Waycross
W. P. Wallace, President Bank of Newborn, Newborn
S. M. Watson, President First National Bank, Colquitt
J. T. Wells, President Effingham County Bank, Guyton
G. B. Whaley, President Merchants & Farmers Bank, Jesup
J. T. Wilkes, President First National Bank, Adel
John J. Wilkins, President American State Bank, Athens
J. J. Williams, President Exchange Bank, Cordele
T. Wisdom, Bank of Chipley, Chipley
J. W. Wise, President Farmers & Merchants Bank, Fayetteville
William C. Wooten, Pres. Buena Vista Loan & Savings Bank, Buena Vista

ILLINOIS

A. W. Bullard, Vice-President Northern Trust Co. Bank, Chicago
C. P. Clifford, Mgr. For. Ex. Dept., 1st National Bank, Chicago
H. G. P. Deans, V.-P., Merchants Loan & Trust Co., Chicago
William R. Dawes, Vice-President Central Trust Co., Chicago
John Fletcher, V.-P. Fort Dearborn National Bank, Chicago
Ernest A. Hamill, Corn Exchange National Bank, Chicago
E. D. Hulbert, President Merchants Loan & Trust Co., Chicago
Joseph E. Otis, V.-P. Central Trust Co. of Illinois, Chicago
Arthur Reynolds, V.-P. Continental & Commercial Nat. Bank, Chicago
M. A. Traylor, First Trust & Savings Bank, Chicago
H. A. Wheeler, Vice-President Union Trust Co., Chicago

IOWA

John A. Cavanaugh, Des Moines National Bank, Des Moines

KANSAS

George S. Hovey, Pres. Inter-State National Bank, Kansas City

LOUISIANA

J. D. Baughman, President Farmerville State Bank, Farmerville
G. A. Blaffer, Commercial National Bank, New Orleans
J. W. Bolton, President Rapides Bank, Alexandria
W. A. Boylston, President Bank of Coushatta, Coushatta
Joseph A. Breaux, Pres. New Iberia Nat. Bank, New Iberia
L. O. Broussard, President Bank of Abbeville, Abbeville
D. M. Brower, President Bank of West Carroll, Forest
A. L. Bryan, President First National Bank, Winnfield
A. Bumser, Metropolitan Bank, New Orleans
Eugene Cazedessus, V.-P. Bank of Baton Rouge, Baton Rouge
John Chaumont, President Calcasieu State Bank, Oberlin
Joseph Curry, President Bank of St. Joseph, St. Joseph
John Dale, President Bank of Vidalia, Vidalia
J. A. Davenport, President Mer Rouge State Bank, Mer Rouge

E. G. Davis, President Covington Bank & Trust Co., Covington
R. L. Derouen, President Evangeline Bank & Trust Co., Ville Platte
Lynn H. Dinkins, Interstate Trust & Banking Co., New Orleans
E. D. Dubuisson, President Opelousas National Bank, Opelousas
C. J. Ellis, President Richland State Bank, Rayville
T. G. Erwin, President Bank of West Baton Rouge, Port Allen
Jules Escude, Cashier Central Bank & Trust Co., Mansura
C. O. Ferguson, President Homer National Bank, Homer
G. R. Ferguson, Sr., President First State Bank, Leesville
T. E. Flourney, President Ouachita National Bank, Monroe
C. O. Gayle, President Bank of Benton, Benton
T. B. Gilbert, Sr., President Franklin State Bank, Winnsboro
J. N. Greene, President First National Bank, Abbeville
W. G. Hamberlin, President Bank of Greensburg, Greensburg
J. N. Hill, President Lake Providence Bank, Providence
W. R. Irby, Canal Bank & Trust Co., New Orleans
A. P. Irwin, President Bank of Clinton, Clinton
J. W. Joffrion, President Avoyelles Bank & Trust Co., Marksville
Bank Johnson, Vice-President Bank of Commerce, Mansfield
J. M. Johnson, President Tallulah State Bank, Tallulah
W. M. Knott, President Sabine State Bank, Many
Arthur B. LaCour, Pres. Pointe Coupee Trust & Savings Bank, New Roads
G. W. Lawhon, President Bank of Webster, Minden
P. L. Lawrence, President First Bank of Acadia, Crowley
Jacob Lebermuth, President Bank of Ascension, Donaldsonville
Alfred LeBlanc, 833 Gravier Street, New Orleans
John Legier, Jr., City Bank & Trust Co., New Orleans
J. B. Lindsley, Pres. Wash. Bank & Trust Co., Franklinton
R. Martin, President Bank of St. Martinsville, St. Martinsville
J. H. McMahon, President First National Bank, DeRidder
J. H. McNeely, President Bank of Colfax, Colfax
N. P. Moss, President First National Bank, LaFayette
L. M. Pool, Marine Bank & Trust Co., New Orleans
Andrew Querbes, President First National Bank, Shreveport
J. C. Rives, President Bank of Commerce, Mansfield
M. J. Saunders, Whitney Central Bank Building, New Orleans
J. W. Shephard, President Commercial Bank, Arcadia
A. E. Simonton, President Jackson Parish Bank, Jonesboro
E. K. Smith, President Commercial National Bank, Shreveport
H. W. Smith, President Ruston State Bank, Ruston
R. M. Taliaferro, President Harrisonburg State Bank, Harrisonburg
James A. Tharp, Liberty Bank & Trust Co., New Orleans
Charles J. Theard, Citizens Bank, New Orleans
C. A. Traylor, President Caldwell Bank, Columbia
D. Vila, 217 Varieties Alley, New Orleans
A. W. Watson, President Exchange Bank, Natchitoches
H. S. Weigel, President Amite Bank & Trust So., Amite
W. S. Wheeler, U. S. Trust & Savings Bank, New Orleans
J. B. Wright, President Bank of Jena, Jena

MARYLAND

Charles T. Crane, Pres. Farmers & Merchants Nat. Bank, Baltimore
John M. Dennis, President Union Trust Co. of Maryland, Baltimore
Alfred D. Graham, President Citizens National Bank, Baltimore
Waldo Newcomer, Pres. Nat. Exchange Bank, Baltimore
H. B. Wilcox, V.-Pres. Merchants Mechanics First Nat. Bank, Baltimore

MASSACHUSETTS

Norman I. Adams, V.-P. National Shawmut Bank of Boston, Boston
Alfred L. Aiken, Pres. National Shawmut Bank of Boston, Boston
Thomas P. Beal, Jr., V.-P. Second National Bank, Boston
W. F. Benkiser, The First National Bank of Boston, Boston
John S. Brayton, President First National Bank, Fall River
Irving S. Cook, President The First National Bank, New Bedford
R. B. Cox, V.-Pres. Webster & Atlas National Bank, Boston
F. Abbot Goodhue, The First National Bank of Boston, Boston
Keith McLeod, Vice-President Merchants Sational Bank, Boston
H. C. W. Mosher, President Merchants National Bank, New Bedford
Philip Stockton, President Old Colony Trust Co., Boston
Arthur R. Stubbs, The First National Bank of Boston, Boston

MICHIGAN

E. W. Clark, Pres. First & Old Detroit National Bank, Detroit
J. H. Hart, V.-Pres. First & Old Detroit National Bank, Detroit

MINNESOTA

Cyrus P. Brown, President First National Bank, St. Paul
E. W. Decker, Pres. Northwestern Nat. Bank, Minneapolis
R. C. Lilly, President Merchants National Bank, St. Paul

MISSISSIPPI

J. H. Arrington, Bank of Monticello, Monticello
C. E. Bates, Amite County Bank, Gloster
R. L. Bennett, Lamar County Bank, Purvis
C. Blankenship, Bay Springs Bank, Bay Springs
M. M. Brister, Citizens Bank & Trust Co., Yazoo City
R. P. Brown, Bank of Pontotoc, Pontotoc
J. F. Cazeneuve, Hancock County Bank, Bay St. Louis
B. T. Clark, Bank of Tupelo, Tupelo
W. D. Cook, Farmers & Merchants Bank, Forest
M. E. Cooper, Bank of Wiggins, Wiggins
W. A. Cox, Riverside Bank, Marks
G. W. Covington, Bank of Hazlehurst, Hazlehurst
J. W. Crawford, Bank of Hickory Flat, Hickory Flat
L. B. Curtis, Calhoun City Bank, Calhoun City
A. S. Davis, Peoples Bank, Mendenhall
J. S. Davis, Fulton Bank, Fulton
W. D. Davis, Brookhaven Bank & Trust Co., Brookhaven
J. C. Dorsett, Bank of Leakesville, Leakesville
W. R. Early, Sunflower Bank, Indianola
W. H. Ellsworth, Merchants & Manufacturers Bank, Ellisville
D. S. Farrar, First National Bank, Rosedale
T. P. Flinn, Hernando Bank, Hernando
F. W. Foote, First National Bank, Hattiesburg
H. C. Forst, Bank of Holly Springs, Holly Springs
I. L. Gaston, First State Bank, Columbus
F. B. Graft, Bank of Rolling Fork, Rolling Fork
H. B. Greaves, Canton Exchange Bank, Canton
B. W Griffith, President First National Bank, Vicksburg
J. Frank Hall, Bank of New Albany, New Albany
J. J. Harry, First National Bank, Gulfport
Henry Hart, Bank of Winona, Winona
Samuel Hart, Bank of Carrollton, Carrollton
H. C. Herring, Pascagoula National Bank, Pascagoula
S. J. High, V.-P. Peoples Bank & Trust Co., Tupelo
W. P. Holland, President Planters Bank, Clarksdale
C. C. Ivey, Bank of West Point, West Point
A. L. Jagoe, Iuka Guaranty Bank, Iuka
T. G. James, Tallahatchie Home Bank, Charleston
R. L. Jordan, Leake County Bank, Carthage
C. J. Kees, Commercial Bank, Woodville
J. A. Kennedy, Perry County Bank, New Augusta
R. C. King, Bank of Commerce, Greenwood
W. P. Kretschmar, Commercial Savings Bank, Greenville
T. B. Lampton, V.-P. Capital National Bank, Jackson
W. E. Lampton, Columbia Bank, Columbia
W. M. Lampton, Magnolia Bank, Magnolia
A. B. Learned, Britton & Koontz Bank, Natchez
O. C. Leigh, Bank of Eupora, Eupora
Morris Lewis, Merchants & Formers Bank, Lexington
G. M. Luce, Bank of Lucedale, Lucedale
W. W. Magruder, Security State Bank, Starkville
J. L. McCracken, Bank of Louisville, Louisville
T. W. McCoy, Merchants National Bank, Vicksburg
D. H. McGehee, Bank of Franklin, Meadville
J. W. McLarty, Bank of Water Valley, Water Valley
S. L. McLaurin, Rankin County Bank, Brandon
W. H. Morse, Tylertown Bank, Tylertown
W. H. Negus, President First National Bank, Greenville
J. B. Newton, Bank of Commerce, Poplarvihe
Oscar Newton, Jackson-State National Bank, Jackson
S. W. Owen, Citizens Bank, Tunica
E. P. Peacock, Bank of Clarksdale, Clarksdale
Thomas E. Pegram, Bank of Ripley, Ripley
H. T. Perkins, Senatobia Bank, Senatobia
W. B. Potts, Merchants & Farmers Bank, Kosciusko
D. H. Quinn, First Nat. Bank, Ackerman
J. B. Rawls, Mount Olive Bank, Mount Olive
C. Rosenbaum, Commercial Bank, DeKalb
D. Runyon, Merchants & Planters Bank, Waynesboro
J. B. Sanders, Booneville Banking Co., Booneville
C. M. Savage, Farmers & Merchants Bank, Okolona
T. J. Sharp, First National Bank, Corinth
A. D. Simpson, First National Bank, Meridian
James Stone, Bank of Oxford, Oxford
J. P. Stovall, Panola County Bank, Sardis
S. H. Stribbling, Bank of Philadelphia, Philadelphia
Eugene L. Sykes, First National Bank, Aberdeen
J. M. Taylor, Mississippi Southern Bank, Port Gibson
J. J. Tatom, Newton County Bank, Newton
S. H. Terrell, Bank of Quitman, Quitman
J. T. Thomas, Grenada Bank, Grenada
W. L. Toney, Citizens Bank & Trust Co., Belzoni
Jeff Truly, Jefferson County Bank, Fayette
A. J. Tulles, Raleigh State Bank, Raleigh
A. G. Wiliams, Bank of Blountsville, Prentiss
E. Y. Yates, Merchants & Farmers Bank, Macon

MISSOURI

J. F. Downing, President New England National Bank, Kansas City
Frank Houston, First National Bank, St. Louis
Breckenridge Jones, Mississippi Valley Trust Co., St. Louis
J. G. Lonsdale, President National Bank of Commerce, St. Louis
H. R. Lyon, President Midland National Bank, Kansas City
E. F. Swinney, President First National Bank, Kansas City
F. O. Watts, President First National Bank, St. Louis

NEBRASKA

F. H. Davis, President First National Bank of Omaha, Omaha
Luther Drake, Merchants National Bank, Omaha

NEW YORK

W. F. Albertsen, V.-P. Mechanics & Metals National Bank, N. Y. C.
J. S. Alexander, President National Bank of Commerce, N. Y. C
J. Howard Audrey, National Bank of Commerce, N. Y. C.
Joseph A. Broderick, National Bank of Commerce, N. Y. C.
T. B. Clarke, Jr., V.-P. Harriman National Bank, N. Y. C.
Garrard Comly, Vice-President Citizens National Bank, N. Y. C.
H. J. Cook, Vice-President Equitable Trust Co., N. Y. C.
Richard Delafield, President National Park Bank, N. Y. C.
E. H. Ferry, Vice-President Hanover National Bank, N. Y. C.
B. D. Forster, V.-P. Bank of Manhattan County, N. Y. C.
George W. Fraker, National City Bank, N. Y. C.
F. J. Fuller, Vice-President Central Union Trust Co., N. Y. C.
Ben. L. Gill, V.-Pres. Seaboard National Bank, N. Y. C.
George C. Haigh, V.-P. American Exchange National Bank, N. Y. C.
Beverly D. Harris, Vice-President National City Bank, N. Y. C.
F. L. Hilton, Vice-President Merchants National Bank, N. Y. C.
James D. Hopkins, V.-Pres. Textile Banking Co., Inc., N. Y. C.
Percy H. Johnston, Vice-President Chemical National Bank, N. Y. C.
L. F. Kiesewetter, Vice-President Bank of New York, N. Y. C.
Frederick G. Lee, Pres. Irving Trust Co., 233 Broadway, N. Y. C.
J. A. Lewis, Vice-President Irving National Bank, N. Y. C.
J. P. Maguire, V.-P. Textile Banking Co., 120 Broadway, N. Y. C.
J. S. Maxwell, Vice-President Liberty National Bank, N. Y. C.
John McHugh, V.-P. Mechanics & Metals National Bank, N. Y. C.
S. H. Miller, Vice-President Chase National Bank, N. Y. C.
W. H. Perkins, President Bank of America, 44 Wall St., N. Y. C.
Lewis E. Pierson, President Irving National Bank, Woolworth Bldg., N. Y. C.
Harry T. Ramsdell, President Manufacturers & Traders Bank, Buffalo
E. F. Rorebeck, Vice-Pres. Metropolitan Trust Co., N. Y. C.
John E. Rovensky, V.-Pres. National Bank of Commerce, N. Y. C.
Eugene W. Stetson, V.-P. Guaranty Trust Co. of N. Y., N. Y. C.
Jerome Thralls, Secty-Treas. Discount Corp. of N. Y., N. Y. C.
E. P. Townsend, Cashier, Importers & Traders Nat. Bank, N. Y. C.
J. C. Van Cleaf, Vice-President National Park Bank, N. Y. C.
S. H. Vorhees, Vice-President National City Bank, N. Y. C.

NORTH CAROLINA

R. D. Bann, Farmers Bank, Hillsboro
Thomas H. Battle, National Bank of Rocky Mount, Rocky Mount
L. A. Bethune, Bank of Clinton, Clinton
Charles C. Blanton, First National Bank, Shelby
F. K. Borden, Wayne National Bank, Goldsboro
C. C. Branch, Bank of Pender, Burgaw
H. C. Bridger, Bank of Bladenboro, Bladenboro
D. D. Brinkley, Washington County Bank, Plymouth
C. M. Brown, First National Bank, Washington
J. W. Burton, Bank of Onslow, Jacksonville
A. W. E. Capel, Bank of Montgomery, Troy
J. S. Carr, First National Bank, Durham
J. B. Collins, Bank of Jones, Trenton
T. E. Cooper, Bank of Southport, Southport
J. H. Culbreth, National Bank of Fayetteville, Fayetteville
W. R. Drake, Jr., Merchants National Bank, Raleigh
J. C. Exum, First National Bank, Snow Hill
J. M. Fix, Alamance Loan & Trust Co., Burlington
E. G. Flanagan, Greenville Banking & Trust Co., Greenville
T. Gillam, Bank of Windsor, Windsor
J. G. Godard, Bank of Martin, Williamston
C. C. Haggard, Bank of Ahoskie, Ahoskie
S. P. Hatch, Bank of Sanford, Sanford
C. W. Horn, Clayton Banking Co., Clayton
A. L. James, First National Bank, Laurinburg.
L. L. Jenkins, First National Bank, Gastonia
H. T. Kelly, Bank of Alexander, Taylorsville
J. H. Lee, First National Bank, Monroe
H. W. Lewis, Bank of Northampton, Jackson
J. S. Lewis, First National Bank, Asheboro
W. L. London, Bank of Pittsboro, Pittsboro
N. B. McCanless, Peoples National Bank, Salisbury
T. A. McNeil, Farmers Bank, Lumberton
S. G. Mewborn, Banking & Trust Co., Wilson
J. C. Mills, Commercial Bank, Rutherfordton
J. F. Moore, Bank of Davie, Mocksville
J. B. Owen, Citizens Bank, Henderson
W. S. Parsons, Bank of Pee Dee, Rockingham
D. E. Rhyme, First National Bank, Lincolnton
C. H. Robinson, First & Citizens National Bank, Elizabeth City
L. D. Robinson, Bank of Wadesboro, Wadesboro
W. H. Ruffin, First National Bank, Louisburg
D. H. Senter, Bank of Lillington, Lillington
J. B. Shulken, Bank of Whiteville, Whiteville
U. L. Spence, Bank of Moore, Carthage
H. C. Stokes, Farmers Bank & Trust Co., Hertford
H. H. Taylor, National Bank of Kinston, Kinston
J. C. Thomas, Bank of Hoke, Raeford
G. A. Warlick, Shuford National Bank, Newton
Ivey Watson, Bank of Enfield, Enfield
E. T. White, National Bank of Granville, Oxford
C. N. Williams, Bank of Warren, Warrenton
Julien Wood, Bank of Edenton, Edenton
W. H. Wood, American Trust Co., Charlotte

OHIO

J. C. Campbell, President National Bank of Commerce, Columbus
G. A. Coulton, President Union Commercial Bank, Cleveland
Charles W. Dupuis, V.-P. Citizens National Bank, Cincinnati
Charles A. Hinsch, Pres. The Fifth-Third National Bank Cincinnati
John Sherwin, President First National Bank, Cleveland

OKLAHOMA

J. M. Armfield, President Cordell National Bank, Cordell
F. V. Askew, President First National Bank, Tecumseh
E. G. Bailey, Cashier Eufaula National Bank, Eufaula
W. F. Barber, President Citizens State Bank, Lawton
G. L. Benson, President Farmers National Bank, Holdenville
M. Board, President Exchange National Bank, Muskogee
E. M. Bowers, Cashier, Citizens Bank & Trust Co., Pryor
S. G. Bryan, Cashier American National Bank, McAlester
Frank Bryant, Vice-President Central National Bank, Tulsa
J. A. Carlbert, President First National Bank, Arapaho
F. C. Carr, President Exchange National Bank, Ardmore
J. W. Chester, President First State Bank, Hugo
R. M. Chilcutt, President Merchants & Planters National Bank, Ada
F. B. Conrad, President First National Bank, Marietta
John P. Cook, President Guaranty State Bank, Okmulgee
Frank Craig, President City National Bank, McAlester
D. P. Delaney, President Sallisaw Bank & Trust Co., Sallisaw
W. H. Donahue, Vice-President Oklahoma National Bank, Chickasa
T. H. Dwyer, President Chickasa National Bank, Chickasa
C. T. Engle, President Commercial Bank, El Reno
E. N. Fink, President Commercial National Bank, Muskogee
Guy Ford, Cashier First National Bank, Sayre
W. A. Goforth, Cashier First National Bank, Idabel
Ted Good, Cashier, LeFlore County Bank, Poteau
Lyman J. Gray, President Oklahoma State Bank, Guthrie
Eugene P. Gum, Sec'y Oklahoma Bankers Ass'n, Oklahoma City
M. M. Hayes, President First State Bank, Stigler
J. A. Henry, President Farmers State Bank, Hollis
F. B. Heron, Cashier First National Bank, Madill
C. H. Hoke, First National Bank, Stillwater
C. W. Howard, President National Bank of Commerce, Frederick
P. A. Janeway, President Mangum National Bank, Mangum
George W. Jones, President First National Bank, Westville
Phil C. Kidd, Vice-President First National Bank, Norman
J. K. Lilliard, Cashier First Guaranty Bank, Wewoka
W. J. Long, President National Bank of Commerce, Pauls Valley
J. G. Loving, President First National Bank, Coalgate
A. J. Martin, President Okemah, National Bank, Okemah
T. P. Martin, Jr., Pres. Oklahoma Stock Yards, National Bank, Oklahoma City
W. A. McAtee, Cashier National Bank of Hastings, Hastings
H. A. McCauley, President Sapulpa State Bank, Sapulpa
B. A. McKinnes, Vice President Durant National Bank, Durant
T. F. Menninger, President Atoka State Bank, Atoka
A. E. Patrick, President First State Bank, Chandler
J. R. Prentice, Cashier First National Bank, Duncan
Guy C. Robertson, First National Bank, Lawton
D. O. Scott, President First National Bank, Tahlequah
E. S. Shidler, Cashier Stockgrowers State Bank, Pawhuska
R. C. Smallwood, Cashier First State Bank, Wilburton
H. T. Smith, President National Bank of Anadarko, Anadarko
Charles T. Speice, Vice-President Peoples National Bank, Kingfisher
C. H. Stratton, President Security State Bank, Pawnee
D. C. Teter, President First National Bank, Tishomingo
J. R. Thompson, Cashier Citizens State Bank, Wagoner
E. K. Thurmond, President First National Bank, Sayre
Clark Wasson, Cashier Citizens National Bank, Antlers
G. C. White, President Park National Bank, Sulphur
F. J. Wikoff, President Tradesmen State Bank, Oklahoma City
D. S. Wolfinger, President City Guaranty Bank, Hobart
J. S. Wood, President City National Bank, Altus

PENNSYLVANIA

M. G. Baker, President Penn National Bank, Philadelphia
H. Brooklehurst, President Textile National Bank, Philadelphia
William Y. Conrad, V.-P. Central National Bank, Philadelphia
W. K. Hardt, V.-P. Fourth Street National Bank, Philadelphia
William A. Law, President First National Bank, Philadelphia
W. S. Maddox, V.-P. Philadelphia National Bank, Philadelphia
J. R. McAllister, Franklin National Bank, Philadelphia
Harrison Nesbit, President Bank of Pittsburgh, Pittsburgh
D. W. Parry, V.-P. Farmers Deposit National Bank, Pittsburgh
Robert Waldrop, President Peoples National Bank, Pittsburgh

SOUTH CAROLINA

A. H. Anderson, President Citizens National Bank, Anderson
G. F. Bamberg, President Bamberg Banking Co., Bamberg
J. D. Bostwick, President Bank of Ridgland, Ridgland
J. McD. Bruce, President Pickens Bank, Pickens
H. D. Calhoun, President Home Bank, Barnwell
H. G. Carrison, President Bank of Camden, Camden
C. L. Cobb, Cashier Peoples National Bank, Rock Hill
J. S. Corbett, President First National Bank, Bishopville
W. H. Cross, President Farmers & Merchants Bank, Marion
M. B. Dial, President Enterprise National Bank, Laurens
Henry M. Dibble, President Bank of Western Carolina, Aiken
J. K. Durst, President Bank of Greenwood, Greenwood
T. K. Ellis, President The Winnsboro Bank, Winnsboro

F. M. Farr, President Merchants & Planters National Bank, Union
Will A. Freeman, Cashier Conway National Bank, Conway
S. B. George, President Home National Bank, Lexington
J. L. Glenn, President, National Exchange Bank, Chester
E. P. Grice, President Farmers & Merchants Bank, Moncks Corner
George Holmes, President Peoples Bank, Beaufort
John M. Kinard, President Commercial Bank, Newberry
L. A. Klauber, President Bank of St. George
J. P. Matthews, President Palmetto National Bank, Columbia
B. F. Mauldin, President Bank of McCormick, McCormick
H. L. McColl, President Bank of Marlborough, Bennettsville
J. W. McCown, President Farmers Bank & Trust Co., St. Matthews
B. H. Moss, President Edisto National Bank, Orangeburg
W. N. Muller, Bank of Dillon, Dillon
J. W. Norwood, President Norwood National Bank, Greenville
A. E. Padgett, President Farmers Bank, Edgefield
M. T. Pitts, President, Planters National Bank, Saluda
E. H. Pringle, President Bank of Charleston, Charleston
W. E. Richardson, Bank of Hampton, Hampton
R. A. Rivers, President Bank of Chesterfield, Chesterfield
C. G. Rowland, President National Bank of South Carolina, Sumter
J. Allen Smith, President National Bank of Abbeville, Abbeville
Leroy Springs, President Bank of Lancaster, Lancaster
Joseph Sprott, President Bank of Manning, Manning
C. W. Stowl, President Bank of Williamsburg, Kingstree
J. D. Verner, President Bank of Walhalla, Walhalla
R. H. Wichman, President Farmers & Merchants Bank, Waterboro
Bright Williamson, President Bank of Darlington, Darlington
O. E. Wilton, President First National Bank, York

TENNESSEE

C. B. Aden, Cashier First National Bank, Paris
R. N. Bond, Brownsville
A. C. Burchett, Ass't Cashier Bank of Commerce & Trust Co., Memphis
W. A. Caldwell, Vice-President First National Bank, Jackson
J. C. Doyle, Cashier Mercantile Bank & Trust Co., Dyersburg
George Farmer, Cashier Peoples Bank, Martin
N. L. Glournoy, Cashier Bank of Millington, Millington
H. D. Graper, President Farmers Loan & Trust Co., Lexington
S. J. Gwaltney, Cashier Farmers & Merchants Bank, Tiptonville
L. C. Humes, V.-P. & Cashier Guaranty Bank & Trust Co., Memphis
J. M. Jackson, Ass't Cashier Bank of Dyer, Dyer
W. H. Keathley, Manager Peoples Bank, Humboldt
E. A. Maddux, Cashier Fayette County Bank, Somerville
Booker Nance, Cashier Bank of Alamo, Alamo
A. H. Olive, Ass't Cashier First National Bank, Selmer
G. W. Parish, Cashier Farmers State Bank, Huntingdon
C. M. Prudy, Ass't Cashier Farmers & Merchants Bank, Henderson
G. B. Rawlings, Stanton Bank, Stanton
I. T. Tigrett, V.-P. Security National Bank, Jackson
William Tucker, Ripley
J. T. Walker, Pres. Third National Bank, Union City
George T. Webb, Pres. Whitesville Saving Bank, Whitesville

TEXAS

H. B. Brock, President Citizens Bank & Security Co., Fort Payne
August Denoes, Nordheim State Bank, Nordheim
Charles Hoffman, President San Diego State Bank, San Diego
J. E. Coleman, Vice President Guaranty State Bank & Trust Company, Waxahachie
W. H. Frey, President Farmers National Bank, Stephenville
R. A. Reed, President Marlin National Bank, Marlin
A. B. Scarborough, President First National Bank, Bonham
C. J. Von Rosenberg, V.-P. Schumaker State Bank, La Grange
W. W. Barron, President First National Bank, Roby
C. Surginer, President First National Bank, Floydada
R. R. Waldrop, President First State Bank, Crowell
J. R. Farmer, President First National Bank, Richmond
J. M. Fleming, President First National Bank, Vernon
T. J. Hall, President Fairfield State Bank, Fairfield
G. F. Hindes, Pres. Pearsall National Bank, Pearsall
Temple D. Smith, Pres. Bank of Fredericksburg, Fredericksburg
W. B. Campbell, President First National Bank, Goliad
R. S. Dilworth, President Dilworth Bank, Gonzales
C. B. Dorchester, Pres. Merchants & Planters Nat. Bank, Sherman
Tucker Royal, President Royal National Bank, Palestine
E. J. Mantooth, President Lufkin National Bank, Lufkin
W. M. Coleman, President Power State Bank, Archer City
J. A. Walton, President Atascosa County State Bank, Jourdanton
C. F. Hellmuth, President First National Bank, Beileville
C. H. Mansfield, President First State Bank, Bandera
Paul D. Page, President Citizens State Bank, Bastrop
E. A. Fancher, President Farmers National Bank, Seymour
John W. Cook, President Commercial National Bank, Beeville
T. B. Benson, Cashier Bartlett National Bank, Bartlett
E. L. Brown, Vice-President Alamo National Bank, San Antonio
Charles Klett, President Johnson City State Bank, Johnson City
C. W. Tidwell, President First National Bank, Meridian
James Hubbard, President First National Bank, Boston
F. Kiber, President Angleton State Bank, Angleton
H. O. Boatright, President First National Bank, Bryan
Richard G. Miller, President Falfurrias State Bank, Falburrias
T. C. Yantis, President Brownwood National Bank, Brownwood
W. H. Jenkins, President Caldwell National Bank, Caldwell
A. Howell, President Burnet National Bank, Burnet
G. W. Baker, Vice-President Lockhart National Bank, Lockhart
Willett Wilson, President First National Bank, Port Lavaca
J. F. Dyer, President First National Bank, Baird
John Gregg, President Merchants National Bank, Brownsville
W. C. Hargrove, President First National Bank, Pittsburgh
S. E. George, President First National Bank, Linden
W. H. Shook, President First National Bank, Rusk
S. P. Britt, President City National Bank, Childress
T. H. Marberry, Pres. Merchants & Planters Nat. Bank, Henrietta
W. J. Adams, President First National Bank, Robert Lee
D. A. Paddleford, President Coleman National Bank, Coleman
E. H. Winton, Cashier Continental State Bank, McKinney
C. J. Glenn, President First National Bank, Wellington
G. H. Miller, President First National Bank, Columbus
Joseph Faust, President First National Bank, New Braunfels
F. E. Adams, President First National Bank, Comanche
W. O. Schultz, Vice President Guaranty State Bank, Pain Rock
D. Tacy, President First National Bank, Gainesville
J. R. Raby, President First National Bank, Gatesville
C. P. Bowman, Vice President First National Bank, Paducah
S. Smith, President First National Bank, Crosbyton
Nathan Adams, V.-P. American Exchange Nat. Bank, Dallas
J. F. Barron, President First National Bank, Lamesa
F. W. Jaeggli, Pres. 1st State Bank & Trust Co., Cuero
C. A. Larson, President Farmers National Bank, Cooper
J. C. Coit, Cashier Exchange National Bank, Denton
C. A. Jones, President Spur National Bank, Spur
W. H. Parick, President First National Bank, Clarendon

UTAH

E. A. Culbertson, President National Bank of The Republic, Salt Lake City

VIRGINIA

W. Meade Addison, First National Bank, Richmond
J. I. Cofer, Bank of Smithfield, Smithfield
W. W. Dickerson, Peoples National Bank, Lynchburg
W. A. Godwin, Norfolk Nat. Bank, Norfolk
W. T. Harding, Greenville Bank, Emporia
Hon. E. E. Holland, Farmers Bank of Nansemond, Suffolk
R. E. Jarrett, Bank of Jarratts, Jarratts
B. B. Jones, Cashier National Bank of Petersburg, Petersburg
C. E. May, Bank of Lawrenceville, Lawrenceville
Giles H. Miller, National Bank of Commerce, Suffolk
C. C. Vaughn, Jr., Vaughn & Co., Franklin
N. H. Williams, First National Bank, Chase City

## Chamber of Commerce Delegates.

ARIZONA

F. W. Griffin, President Chamber of Commerce, Phoenix
E. W. Hudson, State Horticultural Commission, Tempe
B. E. Marks, Phoenix
Edward F. Parker, Southwest Cotton Co., Phoenix

ARKANSAS

L. C. Adams, Texarkana
L. P. Barkdull, L. P. Barkdull & Co., Fort Smith
E. F. Creekmore, Mgr. Lesser-Goldman Co., Ft. Smith
J. O. Frauenthal, Conway
T. J. Gaughan, Camden
George R. Gordon, Camden
S. G. Smith, Conway

FLORIDA

John S. Bond, Chairman City Commission, Jacksonville
W. F. Coachman, Consolidated Naval Stores Co., Jacksonville
B. R. Kessler, Secretary Chamber of Commerce, Jacksonville
J. J. Logan, American Shipping Co., Jacksonville
W. M. Mason, Jr., Wilson-Mason Co., Jacksonville
Giles Wilson, Florida National Bank, Jacksonville

LOUISIANA

Dr. J. D. Carter, New Orleans
Joe Doxy, Grand Chenier
A. J. Ingersoll, Shreveport
Mat Knight, Shreveport
B. R. McCollister, New Orleans
C. C. Parish, Jones & Whitaker, Baton Rouge
H. L. Puckett, S. L. Stockwell Grocery Co., Baton Rouge
H. Ronaldson, Ronaldson & Puckett, Baton Rouge
A. D. Schloss, Schloss Cotton Ginnery, Baton Rouge
Dr. G. W. Sitman, Burtville
D. C. Vincent, Vinton

MISSISSIPPI

S. E. Barnwell, Greenwood
Dr. H. D. Chipps, Corinth
T. H. Craig, Yazoo City
J. H. Freeman, Greenwood
J. H. Petty, Greenwood
W. T. Priestly, Yazoo City
W. D. Striplin, Striplin Cotton Co., Corinth

OKLAHOMA

J. A. Blaydes, Duncan
L. K. Cone, Tulsa
Frank Fuqua, Duncan
C. E. Strouvelle, Tulsa

NORTH CAROLINA

W. S. Blakeney, Monroe
T. J. W. Broom, Monroe
R. W. Christian, Fayetteville
R. G. Hodges, Kinston
R. A. Morrow, Monroe
T. R. Purdie, Fayetteville
Lionel Weill, Goldsboro
C. E. Wilkins, Goldsboro

SOUTH CAROLINA

Kenneth Baker, Greenwood
G. B. Barron, Union
G. P. Browne, Anderson
J. M. Cherry, Rock Hill
Marion S. Chipley, Greenwood
J. W. Gaston, Wellford
L. M. Jordan, Union
Charles L. O'Neale, Spartanburg
J. C. Pruitt, Starr
J. T. Slatter, Sec'y Columbia Chamber of Commerce, Columbia
R. L. Sturgis, Rock Hill

TEXAS

G. R. Bennett, Bennett, Tarlton Co., Austin
N. B. Birge, Sherman
J. N. Brown, Pres. Alamo National Bank, San Antonio
W. T. Caswell, Austin
Sidney C. Collins, Port Arthur
S. L. Crawford, Crawford-Cosho Co., Ltd., Austin
R. G. Crosby, Austin
J. P. DeLesdernier, Bedel Bldg., San Antonio
Leigh Ellis, Austin
C. S. Flanagan, Port Arthur
W. H. Folts, Austin National Bank, Austin
W. M. Graham, Austin
Franz Z. Groos, President Groos National Bank, San Antonio
J. R. Hutton, Houston
C. L. Jessup, Brownsville
J. A. Kemp, Wichita Falls
W. R. King, City National Bank, San Antonio
W. E. Long, Secretary Chamber of Commerce, Austin
Col. J. B. Mayfield, Tyler
Rene J. Muller, Alamo Bank Building, San Antonio
Clinton Phelps, Sherman
D. C. Reed, E. H. Perry & Co., Austin
L. J. Schneider, American National Bank, Austin
F. G. Smith, Austin
Gus F. Taylor, Tyler
Ward Templeman, Pres. Chamber of Commerce, Navasota
S. S. Tucker, Brownsville
H. A. Wroe, Austin

AMERICAN CHAMBER OF COMMERCE FIR SPAIN DELEGATES

A. B. Caragol, 127 Water St., N. Y. C.

## Ginner Delegates.

ALABAMA

W. F. Bell, Boligee
W. V. Bell, Grady
Lee Bonner, Rosebud
W. L. Bruce, Catherine
M. F. Caffee, Vance
G. W. Clements, Greensboro
H. C. Cobb, Prattville
W. M. Conine, Camp Hill
T. H. Crenshaw, Montrey
Gordon DeRamus, Booth
W. D. Graves, Alexander City
L. Johnson, Marbury
Henry A. Jones, Tuscaloosa
C. P. Killiam, Fort Payne
L. A. Killough, Honoraville
F. F. Lammon, Hartford
M. F. Marks, Centreville
S. McConnico, Oak Hill
Sanford McMurphy, Nellie
J. E. Melton, Maplesville
H. J. Morgan, Albertville
C. A. Patillo, Billingly
J. F. Pierce, Lennox
Walter Popewell, Clanton
B. Quimby, Atmore
J. M. Reynolds, Greenville
L. G. Rowell, Minter
Jeff Roy, Deatsville
T. B. Stephenson, Sardis
S. E. Stewart, Hartselle
P. F. Strother, Camden
W. H. Thomas, Ashby
T. A. Walthall, Jr., Newbern
W. J. Weathers, Georgiana
W. M. Wedgeworth, Wedgeworth
Lee Wharton, Athens
S. L. Whetstone, Mulberry
G. W. Wright, Billingsley

ARKANSAS

Thomas Allinder, Clarkville
E. G. Anderson, Homas
Fred Andrews, Brinkley
W. Y. Bransford, Lonoke
W. F. Bridwell, Little Rock
W. F. Bridwell, Little Rock
A. D. Brown, Hope
A. Burgler, Altus
E. R. Buster, Kingsland
G. T. Cazort, Lamar
W. S. Chance, Texarkana
J. H. Coleman, Alma
D. G. Cook, Hope
A. L. Crittenden, Tupelo
J. H. Crossett, McCrory
J. D. Eldridge, Gregory
D. W. Finder, Walnut Ridge
D. L. Gaughan, Van Duzer
R. T. Harvilla, Augusta
A. T. Hemphill, Richmond
L. G. Howson, Pine Bluff
W. A. Isgrig, Little Rock
B. F. Lumpkin, Prescott
G. N. Lumpkin, Nashville
W. B. Mann, Marianna
E. C. Mayberry, Van Buren
George McFadden, Russellville
J. C. Mebane, Wynne
Henry Moore, Jr., Texarkana
Walter Moore, Poplar Grove
E. T. Mosely, Warren
F. W. Oberste, Hartman
W. R. Orton, Fulton
H. B. Payne, Bluff City
J. B. Pillow, Helena
James H. Pillow, Helena
E. R. Porter, Manning
B. F. Pride, Sparkman
L. G. Pugh, Forrest City
J. W. Rogers, Camden
J. H. Snapp, Fitzhugh
Crit Stuart, Columbus
J. A. Thomas, Magnolia
J. S. Wilmans, Newport

FLORIDA

R. M. Allen, Pinetta
S. Henderson, Sirmans
C. L. Deggett, Greenville
J. B. McCaniel, Lee
M. A. Williams, Madison

GEORGIA

Chess Abernathy, Vidalia
E. W. Acree, Camilla
Charles Adamson, Cedartown
J. W. Aldred, Davisboro
H. C. Anderson, Doerun
T. G. Barfield, Sunnyside
W. D. Bell, Sardis
C. C. Bishop, Draketown
L. L. Bishop, Summertown
E. D. Black, Macon
B. L. Bond, Royston
J. H. Bowman, Resaca
A. P. Brantley, Blackshear
B. L. Brown, Coleman
W. B. Burns, Commerce
Andie Carden, Hogansville
J. N. Carter, Meigs
J. E. Coleman, Cobbtown
J. H. Coleman, Mitchell
J. S. Cowart, Arlington
H. F. Colquitt, Lexington
L. C. Crow, Bogart
J. W. Daniel, Bogart
R. G. Daniel, Millen
R. P. Daniel, Senoia
H. A. Davis, Apalachee
R. J. Dixon, Richland
B. S. Dobbs, Athens
Eugene Drane, Americus
W. D. Drew, Midville
I. W. Etheridge, Jefferson
John D. Faver, La Grange
J. B. Fleming, Goggansville
L. E. Floyd, Chipley
F. B. Fortson, Elberton
James Fowler, Soperton
U. S. Fuller, Culloden
R. E. Fullilove, Bishop
J. R. Gay, Gay
J. K. Gholstin, Comer
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W. A. Glanton, Odessadale
W. T. Hairston, Decatur
J. B. Heath, Girard
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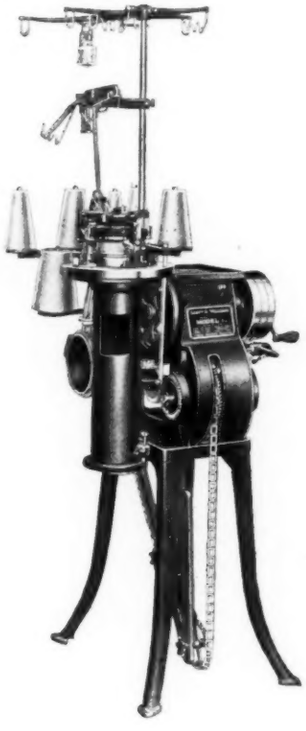
H. W. Johnson, Albany
J. M. Johnson, Alma
J. P. Johnson, Center
M. N. Jones, Pendergrass
Dr. D. M. Jordan, Waycross
W. M. Jordan, Molena
M. R. Jowers, Wray
D. J. King, Unadilla
J. L. Lovvorn, Bowden
J. A. Lynn, Baxley
G. S. Malier, Hampton
J. T. Marshall, Farmington
Z. M. Maynard, Forsyth
W. C. McRae, Mt. Vernon
J. M. Means, Zebulon
W. H. Means, Meansville
G. E. Millers, Hunters
C. H. Moore, Wrightsville
W. R. Moore, Sharon
C. E. Morris, Tucker
L. P. Murray, Arlington
J. W. Nelson, Ideal
J. F. Nicholson, Ty Ty
W. H. Nunnally, Monroe
J. B. O'Conner, Kilbee
S. M. Orr, Heardmont
H. H. Parker, Woodcliff
John H. Quinlan, Cedartown
D. Ragsdale, Dallas
I. H. Rewis, Collins
Charles Robertson, Newborn
E. A. Rozier, Jr., Sparta
F. C. Rozier, New Lacy
J. T. Sanders, Hartwell
W. S. Sitton, Summerville

(*Continued on page* 864.)

# KNITTING SECTION



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With automatic means for preparing the machine for transfer, require less moves on the part of the operator. This means increased production and lower cost.

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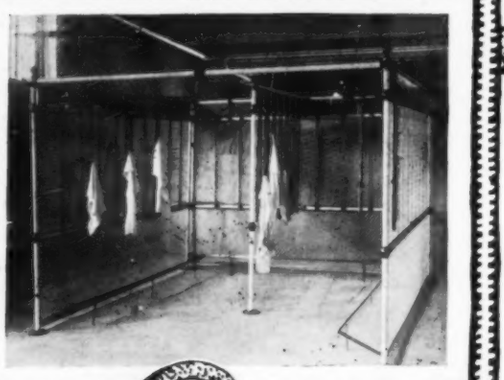
# LINKING THE MILL VILLAGE LAUNDRY TO *REAL* EFFICIENCY



No. 1.

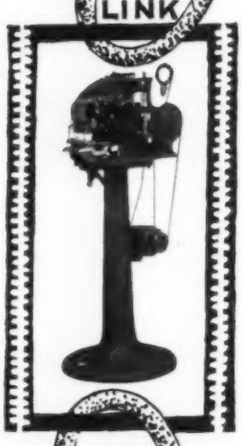
INSTALLING a Mill Village Laundry and saving the 200 or 300 or 400 days' labor lost each week is a step in the right direction. But the system is not complete, it is not economical, UNLESS the proper **Identification Equipment** is installed in the laundry. In other words the

## "National" Booth System

must be included to get proper results. This gives you—and your employees—assurance that *every article sent will be returned.* No lost goods, but legible, correct marking and handling of every piece. THUS YOUR MILL VILLAGE LAUNDRY is certain to be the success you hope for.

Under the "National" Booth System less floor space is required; the markers are separated; there's no confusion in the marking department, and the work can be handled with the minimum number of movements, with but ONE HANDLING of each piece and no cross-overs.

EACH A LINK



No. 2

THAT MEANS

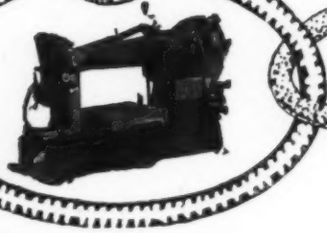
### *We Illustrate Herewith the Various Units that Comprise this System*

NO. 1. The National Rough Dry Assorting Booth.

NO. 2. Improved No. 8 National Power Marking Machine. Marks all classes of laundry work.

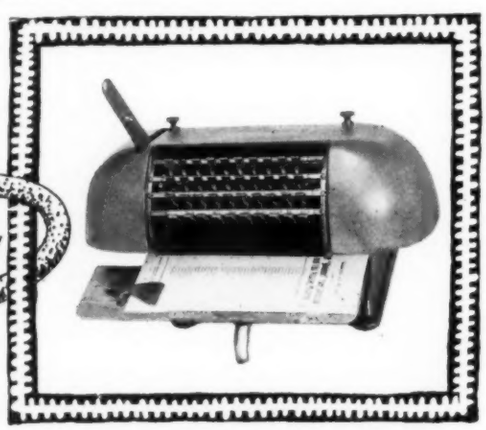
NO. 3. The Rose Label, Tape and Patch Sewing Machine sews previously marked identification tags to garments that cannot, or should not, be marked direct.

NO. 4. The National Lang Counting and List Printing Machine counts and lists in one operation.



REAL EFFICIENCY

No. 3.



No. 4.

***Write today***

For important literature that will prove our case.

TEXTILE DEPT.

# The National Marking Machine Co.

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*New York Office: 40-44 West Fourth St., New York City.*

# The Knit Goods Market

The September knit goods market has been brisk and dull, depending on the angle from which it is viewed. The first view is probably the correct one, for prices have held firm, advances in some lines being noted. Yet in a broad way jobbers have not been conspicuous in the market, notwithstanding retailers, those in particular who draw from mills direct, are buying as usual.

Judged by the activity in silk hosiery, the market is strong and gaining in strength. Coming down to mercerized and the cheaper cotton lines, the demand is less insistent. This may be ascribed to the possession of some little stock by speculative jobbers who bought when prices were at the bottom for the year and held for a rise. Hosiery in second hands may be picked up under mill prices or replacement values, but transactions of this character cannot be accepted as a criterion of the market condition.

Price recessions at mills are unheard of for several reasons. They are prevented by cost and are regarded as unnecessary for moving merchandise, for it is apparent the market is absorbing or shortly will absorb all that mills can offer.

Scarcity is reflected by the announcement of a New York commission house that it will buy 150,000 dozens of boys' 2-2 ribs, 2½ pounds to the dozen, to be of 124-needle body and 150-needle top, and the search that is being made by a manufacturer for combed peeler half hose, 220 needle with high spliced heel and double sole, and 200 needle without features.

While jobbers affected to be not interested in hosiery for next year, they manifested considerable concern over the question as to when prices for spring would be named, and now are giving evidence of being doubtful whether they will have enough underwear for the current year.

Ordinarily there is little interest in fall underwear reorders before October or November. Now distributors are making inquiry as to what will be their chance of getting additional supplies for winter. These chances appear by no means encouraging.

A New York state underwear mill in a letter to its selling agency says: "The shorter work day and decreased output make it necessary for us to withdraw all our numbers for Fall. Our spring allotments have been taken up."

The situation in most mills is not different. A combination of mills in the Mohawk Valley which should be turning out 4,000 dozens of garments a day is producing only 3,000. One of the mills will call in all road salesmen after six weeks, instead of having them out three months as ordinarily.

Pennsylvania underwear mills mainly are at work on orders for Spring, but are taking little new business. They are well booked with orders, however, and are regarded assured of steady operation for the remainder of the year.

Heavy weight underwear bought prior to August ought to prove a rich asset in the hands of retailers. It was sold too low, and notwithstanding cotton yarns have been sagging, will fetch more for mills in position to accept reorders. For illustration, a southern-made 16-pound union suit going to jobbers at $16 a dozen, costs the mill more than one-half that sum for the yarn alone. The same suit was sold for considerably less when mills were more eager for business than they are now.

In heavy underwear, sales and anticipated requirements are in excess of production, and it is regarded a certainty that when the trade comes into the market with spring duplicate orders there will be a like situation as to light weights. This state of the market seems to be quite satisfactory to mill men, since the short production situation is not one of their making. Manufacturers enjoy an advantageous position in the period of a decline in cotton, in which radical advances over present price levels are freely predicted by mill executives who have first-hand knowledge of crop conditions and the attitude of the planter. But among manufacturers the vision of 40 cent cotton has vanished.

A very large mill manufacturing silk underwear is understood to have sold up well into next year, guaranteeing customers against price reductions by the mill. Conditions in silk would appear to make the guarantee a safe proposition for the mill. Thread silk seems to have been sold up to about January 1. What is to be had for immediate or nearby delivery commands unheard of prices. A recent offer by a manufacturer of $12.50 a pound for hosiery silk failed to dislodge a pound. Undoubtedly the craze over silk stockings, which now are worn by probably 50 per cent of the factory girls while at work, has spread to silk underwear, which is about as scarce as full fashioned silk hosiery.

Japan, virtually controlling silk, has accomplished what it seems could not be done by the United States in its control of cotton.

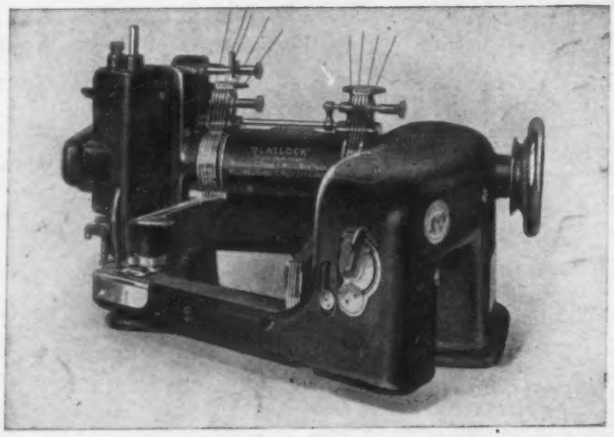
Samples of a line of women's full fashioned all-silk hosiery which is to be offered at $40 a dozen to jobbers have been received by an establishment in New York, at Broadway and Leonard streets. As these stockings will cost the wholesalers $3.50 a pair, less the discount for cash, it is thought they will have to be sold in retail stores at $6. This will be a no higher price relatively than will be paid by women for dainty silk undervests, which have been priced by one large mill at $30 a dozen for next year.

High prices for silks are more readily obtainable because worsted garments promise to be scarce. A Mohawk Valley mill selling the retail trade is so far back in its fall deliveries that a number of its customers threaten to place with it no orders for Spring, unless arrearages are made up very soon. The mill is a full month behind and sees no possibility of catching up. Its lines for fall were taken off in July and not a dozen have been sold since for delivery this year.

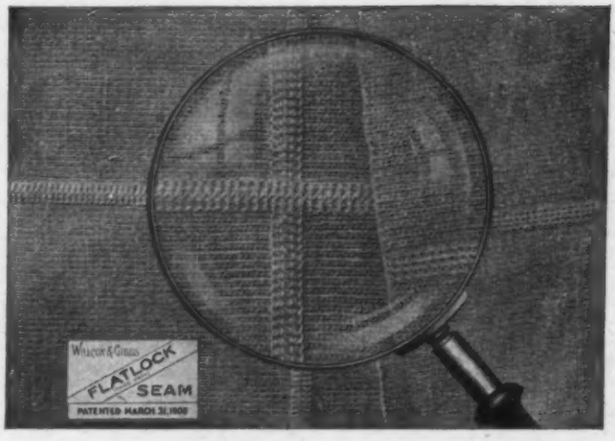
A New York State mill which is crippled by a strike of its operatives is in an even worse position, and one of its customers who had placed orders aggregating $15,000 has received but $300 worth, the customer says. In this instance the order has been cancelled, pursuant to contract written on the order, under which all deliveries not completed by the end of a stated period were to be automatically cancelled, the prices having been guaranteed by the mill against reductions to the end of the delivery period.

The strike which seems to have made it impossible for the mill to keep its orders was declared when the management refused to comply with the demand of the organized employees for the dismissal of a woman who refused to enroll in the organization. The woman had been in the mill for a number of years and it was at once made plain

# WILLCOX SEWING



THE "FLATLOCK" MACHINE




THE "FLATLOCK" SEAM

***Established in 1859, the uni has been to build its machi merely "just good enough"***

Our proved claims for these machines of world wide reputation are:

| | |
|---|---|
| Lowest Maintenance Cost | Largest Production |
| Highest Sustained Speed | Perfect Stitches |
| | Least Vibration |
| | Quietness in Operation |

An Investment—Not an Expense.

The "FLATLOCK" MACHINE, our latest invention, makes absolutely flat seams on "cut" knit underwear. It trims the fabric, and securely stitches the abutted cut edges in one operation. The resultant seam is *no thicker than the garment*, and is soft and smooth to the touch. It will not rip nor ravel, and is stronger than the fabric itself.

Normal speed 2,800 stitches per minute.

Nearly 300 mills in the United States, Canada and Great Britain are using this marvelous machine.

The "FLATLOCK" seam is

*An absolutely flat seam*
*A locked seam*
*A strong seam*
*An elastic seam*
*A thin seam*
*A friendly seam*
*An ornamental seam*

## WILLCOX & GIBBS SEWING MACHINE CO.

Trade Mark

Reg. U. S. Pat. Off.

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**NEW YORK**

Willcox & Gibbs S. M. Co., Ltd., London, Paris, Brussels, Milan.

Canadian Representative: W. J. Westaway Co., 72 James St., N., Hamilton, Ontario

# & GIBBS MACHINES

***form policy of this Company nes as good as possible—not***

The "OVERLOCK" HEMMING MACHINE has been the standard for seaming "cut" knit underwear for 25 years. It trims the superimposed edges and stitches and covers them in one operation.

It also makes an artificial selvedge or overedge for ends of cuffs, anklets and tails.

The "OVERLOCK" HEMMING MACHINE makes an elastic concealed stitch hem on shirt tails and tops of stockings.

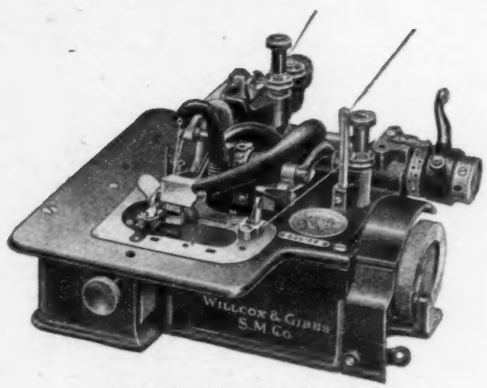
Other types of the "OVERLOCK" machine make beautiful overedgings in straight lines or scallops on kimonos, wrappers, petticoats, tablecloths, bedspreads, lace curtains, etc.

Normal speed, 3,000 stitches per minute.

The *W. & G. HIGH SPEED "LOCKSTITCH" MACHINE* sews on the facings of knit shirts and drawers. The beauty and regularity of its stitch are an added attraction to any garment, and its high speed is an important advantage in these days of keen competition.

In the "making up" trades covering woven fabrics suitable for men, women and children, this machine holds a dominating position.

Where factory conditions permit, the speed may be as high as 4,000 stitches per minute.




THE "OVERLOCK" MACHINE

THE "LOCKSTITCH" MACHINE

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ALWAYS FIRST WITH THE LATEST

ALWAYS FIRST WITH THE LATEST

# BANNER

# FULL AUTOMATIC

# HOSIERY MACHINES

SIMPLICITY — SPEED — PRODUCTION — QUALITY

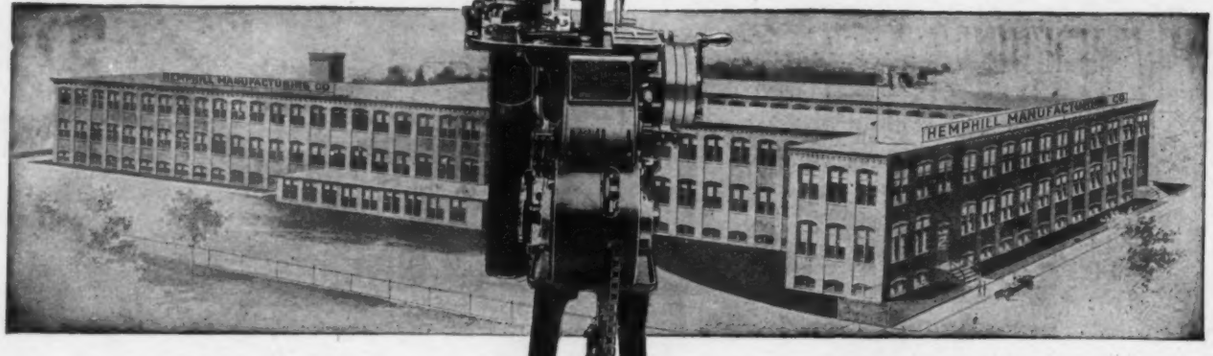
Four important things to consider when buying Hosiery Machinery.

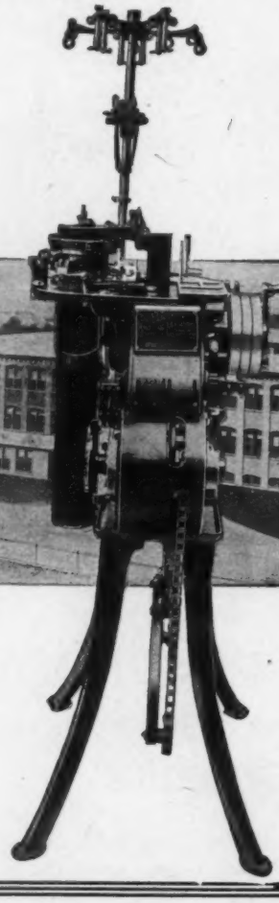
ALL PARTS ACCESSIBLE FROM FRONT OF MACHINE

Write for full particulars and samples of work.

ALL STYLES

ALL GAUGES



## HEMPHILL COMPANY

**Main Office and Factory,**

**Pawtucket, Rhode Island.**

**New York Office, Room 601 Leonard Bldg., 350 Broadway, New York.**

**Philadelphia Office and Showrooms, Rooms 205, 209, 210, Colonial Trust Company Bldg., 13th and Market Sts., Philadelphia, Pa.**

to the local union that she was not to be disturbed. A day or two ago the mill owners found it necessary to call on the authorities for protection for loyal employees.

Mill operatives, in more ways than one, are persistently interrupting production. In an eastern mill where there had been agitation for wage increases and a complete cessation of operations on Saturdays, the management granted an increase for one month, its continuance conditional on a greater output. The effect was the opposite of what was projected, the operatives insisting they were producing to the limit. Yet mill records showed that some of the most stubborn and indifferent were turning off full 50 per cent less work than a very few years ago. The operatives were put back on the previous wage schedule, notwithstanding their objections, after endeavoring to have the manufacturers add to the price of the garments to permit the continuance of the increase.

At another mill two husky men applied for employment and as they represented themselves as ex-soldiers, were offered $25 a week while under instruction in the cutting department, where in a few weeks they would have been able to earn $35. They refused the job, one of them saying, with more insolence than becomes persons looking for a job, that "$25 was a h— of a price to pay an ex-soldier for a week's work." They were ordered out of the establishment and requested to get out of town while walking was good. And still the public professes not to understand why prices are high.

Price is causing no lessening of the desire for silk hosiery, and the only reason more are not worn is that not enough are made. Silk stockings for next year are being bought by jobbers at a rate that attests their confidence in the country continuing on a silk basis for another twelve months. The sales of two mills in the three weeks following their opening for Spring totaled over $12,000,000, and even at that customers did not get all they wanted.

Full fashioned silks with mercerized tops that four years ago went to jobbers at $7 a dozen and under are commanding $22 to $24, and lines at $30 and more are not uncommon. More women than ever before wore silk stockings are paying three dollars and more a pair in retail stores, and four dollars will be paid by many if the craze continues. In fact, a Central West establishment rated wholesale and retail is in the market for novelty silk stockings at anywhere from $36 to $120 a dozen—about the price persons in moderate circumstances paid for a piano not so many years ago. But full fashioned hosiery is to be produced in abundance, for their manufacture is to be started by at least three Philadelphia concerns; also by the Durham Hosiery Mills at Durham, N. C., and mills elsewhere, provided the machinery and raw materials are obtainable.

For the present, manufacturers of seamless silks, finished with the seam to make them look like a fashioned stocking, are having a harvest. Women's circular-made silks, 18 inch boot, with mercerized top, are selling at $10.50, while those with mercerized top range from $12 to $16. Mills making these lines are sold well ahead, and jobbers, through commission houses and selling agents, are really begging for promise of deliveries any time in the next four months.

The market for mercerized hosiery is not so active as some weeks ago, prices having reached a level where buyers are disposed to halt. For ladies full mercerized, mock fashion, 220 needle, $4.75 to $5 about represents the prevailing price for October to December delivery. Half hose of 220 needle mercerized opened for Spring at $3.50 for light weight and $3.75 for heavy. For nearby delivery one establishment has been selling at $4 to $4.25.

Hosiery is being offered for Spring, but not a great deal is being taken by jobbers, many of whom are in New York and other eastern markets apparently awaiting a price announcement which might be regarded as marking the beginning of a decline. Some appeared ready to do business about the middle of September, but just then cotton took an upward turn and sellers were more indifferent than ever. In the meantime fairly good business had been coming from road salesmen and continues to come, orders being for moderate quantities but usually for complete lines.

A salesman in the West sent an order, part for spot, for several thousand dozens of 220 needle mercerized half hose, at $4.25, the remainder to go out this year. A considerably larger order, which came from a section midway between the West and the South, called for 10,000 dozens at $4. Following are quotations of a large mill, for deliveries to December 31:

Women's combed peeler 220 needle, high spliced heel and double sole, $2.75; same, two-thread, seamed back, $3.50; fiber, 18-inch boot, mercerized top, 240 needle, $8.50; same, 12-inch boot, $6; women's fine combed gauze, 2-thread, $3.75; lisle, $3.50; 220 needle mercerized, plain, $4.25 to $4.50; same, seamed, $4.75 to $5, the same price being heard for both 220 and 240 needle; 220 needle combed peeler half hose, $2.15 to $2.25; misses' fine gauge mercerized, $5 on size 7, rise 25 cents, fall 15; 176 needle, women's, 24 ounce, $1.60, men's $1.50 to $1.60.

Prices to be announced shortly by a mill for spring are $4.75 to $5 for ladies' 220 needle mercerized; combed gauze, seamed, $3.50; misses' 28 ounce ribs, $2.25; misses' 3-pound ribs, $3.50 on size 8; 176 needle, men's and women's, same as quoted for delivery this year.

One of the large northern mills is selling nothing for next year and will not name prices until orders for the current year have been gotten out of the way, the management having been so often disappointed with its estimated production that it will incur no risk as to the future. The Durham (N. C.) Hosiery Mills, it is stated, will open early in October for Spring.

A ladies' 260 needle mercerized stocking, with cut out and seamed ankle is to be put out very soon at $6 to $6.25 by a large mill specializing in featured mercerized lines.

Some jobbers are understood to be jockeying for lisle half hose at $3.25 to $3.50 as a 50 cent retail proposition, a substitute for mercerized, which are fast getting beyond the half dollar class. Mercerized hosiery has gone to a price level where it is considered good trade talk to refer to it as "the substitute for silk", and yarn merchants are helping the movement along by keeping the price up to about what artificial silk commanded two or three years ago. Considerable mercerized hosiery is being delivered at prices of some months ago, much lower than those of to-day, which may account for the fact that distributors' purchases are light now.

There is an improvement in the demand for hosiery for export. Mills which do a foreign business through export agencies exclusively report constant inquiries and moderate buying. The quantities contracted for usually are small, but it is noted that frequently an inquiry is followed by an order within 24 hours.

It must be apparent that, with jobbers and retailers pleading for deliveries now, knit goods in most lines will be a scarce commodity later, for the indications are that production will diminish rather than increase, unless, perhaps, with the approach of cold weather idle persons will feel the need of employment and those who are of their own volition keeping their earnings down to bare present requirements will find themselves in need of more. It appears obvious, therefore, that the price declines which jobbers have affected to believe were imminent will not be witnessed, particularly in women's hosiery. But with civic employees affiliating with the federations and fomenting strikes, there is a possibility of diminished consumption. But strikes will be popular only so long as labor does not feel the pinch of hunger and the sting of cold winds, and it may be assumed they will be less frequent when agitators have had a few more demonstrations of the determination of employers to yield no more.

Although prices of hosiery for next year will be higher than for that which was delivered for consumption in 1919, they are not to be moved up proportionately with increased cost. This is made apparent in prices which already have been named and the disposition of manufacturers to respond, so far as they may be able, to the insistence for a lowering of the cost of living. But the public will have to pay the bill in the end, for diminished profits will mean less income for the government in the way of tax on excess profits.

It develops that among mills selling direct to the retail trade prices are low in comparison with what jobbers are paying, particularly as to several mercerized lines. A type of half hose is costing retailers direct from mill around $4.75 a dozen, while jobbers have paid recently as much as $4 to $4.25. Women's mercerized going to jobbers is costing them but 50 cents a dozen less than the price being obtained from some mills selling to the retail trade.

It is explained that retailers are drawing against orders for requirements placed at a time when jobbers were deferring purchases, waiting for the lower prices which have not come, and that now they are placed at a disadvantage in undertaking to compete with direct-to-retailer mills. They missed an opportunity, it appears, when they remained out of the market while retail stores were calling for goods. They wanted prices guaranteed against reductions and were successful in only a small way in trying to have manufacturers assume all the risk of what they affected to believe would continue a declining market.

The guaranteeing of prices may not again be injected as a distributors' protection, for it is declared by a member of the Federal Trade Commission to be an unfair trade practice, operating toward excessive profits for the parties to whom the guarantee is extended. In asking for broader powers for the Commission, in order to carry on a more effective campaign against high prices, a member said: Its a cinch for the jobber, because he can't lose, and takes all the profit in case of a price increase."

Jobbers are believed even now to be buying less of hosiery than are retailers, as though they have forgotten the lesson which was assumed to have been well learned, at considerable cost, some months ago. Not so close to the consuming public as are the retail dealers, they perhaps do not realize that there has been no relaxation in the operations of the country's purchasing power and are too much possessed of the views set forth by Champe S. Andrews in the recent meeting of southern knit goods manufacturers. Mr. Andrews foresaw a smash—some time. While preparation for such an eventuality is eminently desirable, it will receive less attention just now than will means to turn off more goods.

Prices have been forced up, to some extent, by the insistence of distributors that mills hire help, at any cost, to insure deliveries, and mills did so. Now the distributor seems to have taken fright at his own device for protecting himself against a possible shortage and, after being a contributing cause in wage advances, complains that mill prices are excessive. The effect of the first scare—that over a possible scarcity of merchandise—is the same in every textile establishment, from that in which the cotton is ginned or wool combed and in the mill where yarn is spun, up to the factory that produces the finished product.

Wage schedules will not descend nor work days be lengthened while labor is scarce. Neither will there be any material decline in price, and as merchandise will be short in supply, mills will have about all the business they may care to accept. But there is prevalent a feeling that employers as a unit ought to make it known that wages have been boosted to the limit; that further advances will threaten a continuance of unrest. It is felt that the refusal of Boston to reinstate the city's striking policemen is tantamount to notice served that the tide has turned toward a reign of common sense, in civic affairs at least, and that the wholesome effect will be reflected in industry.

Among knitting manufacturers to whom tenders of yarns were made, between the 16th and the 20th of September, there lurks a suspicion that there are considerable quantities of yarns in the hands of dealers and that prices are due for a drop, unless the situation be strengthened by cotton.

One of the large yarn houses has issued a stock sheet of knitting yarns classified as carded and double carded peeler, combed peeler and mercerized. The sheet specified probably 40 lots of the two classes, amounting to over 200,000 pounds of mercerized and more than 300,000 pounds of carded peeler. "These yarns are in stock," is the significant line at the top of the sheet. This house, which is among the better known establishments dealing in yarn, quoted 60s 2-ply mercerized at $2.45 and single combed peeler 30s at $1.10.

Another yarn house names $1.65 for 60s 2-ply combed peeler, and it is understood a sale was made at that figure, for delivery this year.

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The Fisher Governor Company, Inc., Marshalltown, Iowa, has recently issued a catalog, which enters fully into detail in a description of the Fisher steam trap, manufactured by this company. The catalog contains 24 pages and is made up into an attractive booklet. The illustrations therein are especially noticeable, and a careful study of them, without a single reference being made to the reading matter, should convey an excellent idea of the merits of the trap. On the last few pages of the catalog are shown a few suggestive installations of the trap. This catalog and also bulletins of other power plant specialties manufactured by this company will no doubt be mailed to any one interested in this line upon request.

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The Cannon Manufacturing Company, Kannapolis, N. C., has retained E. S. Draper, landscape architect and city planner, Charlotte, N. C., to survey and plan village extension. The Cabarrus Cotton Mills, of the same place, have employed Mr. Draper in a similar capacity.

# Decreased Production---Higher Costs

A careful survey of mill conditions from the standpoint of production supplies no encouragement of the hope for any material reduction in prices of knit goods in 1920. On the contrary, unless there shall begin very soon a paring of cost, starting at the bottom, the finer varieties of hosiery and underwear will cost the consumer more than in 1919.

Cost of production, mounting day by day, is being watched more closely in the average mill than ever before, and among not a few manufacturers it is a question whether output should not be held down to the known requirements of the distributing trade, as a matter of safety. Prices, higher even in some lines of knit goods than the war-time peak are looked on as dangerous, and there is alarm over the prospect of increases, which will be unavoidable so long as consumption continues in high gear and production in low.

Manufacturers of sweaters, underwear and hosiery who consented to an interview on the outlook are so nearly in accord in their estimates of increased costs and diminished production and the reason therefor that their views may be said to afford an approximately accurate diagnosis of the situation. All made comparisons for the period covered in the last twelve months.

In a Pennsylvania hosiery mill there have been two increases in wages, aggregating about 27½ per cent, and by reason of the institution of the shorter work day there has been a radical jump in overhead cost. One year ago the mill figured 28 cents a dozen overhead expense. Today it is 50 cents, and the top appears not to have been reached. In a line of children's socks 70 per cent of the cost, it is reckoned, is labor, so that the wage increase of more than 27 per cent is the chief factor in the cost to the mothers.

One manufacturer making infants' mercerized socks has taken the line off the market for the reason that prices are regarded unhealthy, this applying to both yarn and the finished product, leaving labor out of the question.

Decreased production is viewed by one hosiery mill executive as more serious in the effect on retail prices than the excessive wage scales. In this mill wages have gone up 125 per cent since 1915 and the production is down to 60 per cent of what it was in the early days of the war. It is noted that, having more money for pleasure, the help indulges in longer vacations and more holidays, with the result that it is utterly impossible to estimate with any degree of accuracy what will be the output in any given period.

A Philadelphia full fashioned hosiery mill granted in the Spring a 20 per cent increase in wages and a shortening of the work week from 54 hours to 48. Silk hosiery with mercerized top which sold at $7 a dozen in 1915 and a year ago at $9.75 is going to jobbers at $18 to $22, and in the mill referred to, as in a number of other full fashioned establishments, an agreement has been entered into with the help, providing for an additional 10 per cent increase in pay, to December 31. What the rate will be next year is problematical, but it is understood today's mill prices will show a further jump applying to hosiery going over the retail counter in 1920, especially as production is little more than one-half of demand from distributors, many of whom do not appear to be terrified by the universal complaint over rising prices and are buying to the limit of mill allotments.

A mill specializing in mercerized hosiery for women reports wage increases of 40 per cent in the last twelve months, and is working 50¾ hours per week, in contrast with 54 a year ago. This is longer than the average work week in Philadelphia mills, but still works toward a sharp falling off in production.

One of the large mills selling the retail trade reports a full 20 per cent increase in the payroll, aside from the overhead. The piece workers appear to produce to the limit while at work, but in addition to working fewer hours a day are putting in fewer days a week, absenting themselves frequently, whenever they feel like being idle and adding to cost instead of earning and adding to comfort.

The executive of a sweater establishment finds that the reduction in working time from 54 hours to 48 figures an increase of 12½ per cent increase in labor cost, and on top of this in an addition of 20 per cent in the schedule pay. The mill's prices to its customers show no material increases over the corresponding period of 1918, but, the executive says, prices will have to go higher, as, at present, with deliveries being made at prices established earlier in the year, the margin of profit is significant, leaving out of consideration the usual business hazard. The mill is declining fall business at prevailing prices and is very cautious as to commitments for futures.

In another sweater mill, making silks, worsteds and general lines, the wage increases in the last twelve months aggregate 38 per cent. Its prices to jobbers are higher, on silk lines in particular, than a year ago, but are not at the level relatively of the greater operating cost, and advances, it is felt, are assured.

Reports from underwear mills are but a repetition of those from hosiery and underwear manufacturers. In the Mohawk Valley of New York the working time has been reduced to 48 hours from 54 a week and the wage increases in the last twelve months aggregate from 20 to 25 per cent. Production on the whole is not more than 65 per cent of normal, although in one large mill it reaches 75.

Underwear mills selling for next spring are obtaining higher prices than prevailed when what the consumer has been buying this year was sold to dealers. It was agreed in a small conference of manufacturers that there was justification for advance over present prices, which were named at a time when it was assumed that with the ending of the vacation season mill help would be disposed to work half Saturdays and an additional hour five days each week. It is found that the help has no intention of doing any such thing. Prospective production for the remainder of the season is in part the basis of a prediction that, with yarns showing no material decline, underwear prices for next Spring will have to be advanced, so far as late business is concerned.

The executive of a large establishment manufacturing sweater coats who would be willing to make a sacrifice for lowering prices believes the trade at large—mill, jobber and retailer—should join in such a movement. Should dealers be unwilling to operate on such a basis of margin more nearly approching that of pre-war times, he suggests that manufacturers make their mill prices known to the public. The mill manager who makes a start in that direction will be heralded by the public as a philanthropist and branded

undesirable by dealers. The suggestions of the manufacturer referred to are embraced in a recommendation that manufacturers in each knitting center enlist the cooperation of trade publications and the newspaper press for:

1. Informing the public of the reasons for the very high cost of production of knit goods and the commodities entering into their manufacture, from the gathering of the raw material and spinning the yarn.

2. Making it clear that by reducing cost of production, increases in wages which affect only a portion of those who are employed, will not be necessary for establishing a more nearly equitable relation between earnings and necessary expenditures.

3. Encouraging boys and girls quitting school to learn some useful occupation other than that of office work.

Girls and boys, it is pointed out, pay large sums to become educated as stenographers and typists, clerks and bookkeepers and for other office duties, while a knitting mill operative earns while he or she learns and becomes a finished operative in a few weeks, always secure in having remunerative employment. A well known mill now has open a position for a person qualified for superintendent—a person who knows a knitting mill from the ground up—to whom a salary of $6,000 is offered.

As to manufacturers taking the public into their confidence in the matter of mill prices, the sweater mill executive quotes Attorney General Palmer that "certain dealers are seeking to defeat the government's fight against high prices."

That the Attorney General may not have been far wrong is indicated in the following incidents, each of which has been verified: A union suit bought from a jobber at $13.50 a dozen—$1.12½ per garment—was sold by a retailer at $2. This happened in Baltimore. Another type of union suit for which jobbers obtained $7.50 to $9 a dozen, depending on the time of purchase, was sold by a retail store regularly at $1.75. When mills some weeks ago were getting $1.25 a dozen for 176 needle stockings a woman bought a pair in a retail store in West Philadelphia, for which she was charged fifty cents—$6 a dozen.

The profiteering could not be charged to manufacturers.

## Hosiery Exports.

During the first seven months of 1919 there were exported 73,340,268 pairs of stockings made in hosiery mills of the United States. The quantity is given in official statistics, which place the value at $20,034,064. This is one-tenth of the value of the production of all knitting mills in the United States, according to figures accompanying the memorable report of W. C. Redfield, then Secretary of the Department of Commerce, which was submitted in December, 1915, after an investigation that the Department started in August, 1914, for refuting the contentions of manufacturers for a stronger measure of protection than was provided in the latest schedule of custom duties.

Making allowances for increases in values, this year's hosiery exports to July 31 still constitute probably one twenty-fifth of the entire knit goods production in 1909, assuming that ex-Secretary Redfield's figures were approximately correct. Stating the quantity in commercial terms, the seven months' exports amounted to 6,111,689 dozens, of which 5,033,032 dozens were cotton and 1,078,689 dozens artificial silk. Among the months June led in both, with 899,432 dozens of cotton and 203,048 dozens of artificial silk, January ranking second as to both.

Hosiery exports for July, the latest month for which statistics are available, were 670,029 dozens of cotton, valued at $1,720,408, and 123,715 dozens of artificial silk, of a value of $630,062, a total of 793,744 dozens valued at $2,350,110.

England took 107,655 dozens of cotton, which was 4,304 dozens less than was sent to Denmark, where, however, only 16,298 dozens of artificial silk were shipped, against 78,882 dozens to England. Other countries taking more than 5,000 dozens of cotton and more than 2,000 dozens of artificial silk were the following, the first numerals representing the quantities of cotton and the second applying to artificial silk:

Belgium, 49,541; 3,151. France, 9,042; 3,500. Greece, 20,796; cotton. Italy, 12,027 cotton. Netherlands, 33,169 cotton. Norway, 56,365 cotton. Sweden, 26,741 and 2,103. Canada, 51,705 and 3,250. Mexico, 11,056 cotton. Cuba, 37,102 cotton. Dominican Republic, 5,065 cotton. Argentina, 31,865 cotton. Peru, 7,520 cotton. Uruguay, 6,878 cotton. Australia, 29,077 cotton. New Zealand, 7,322 artificial silk. French Africa, 7,660 cotton.

Sixty-three countries are named as importers of United States hosiery in July, Germany not appearing on the list. Austria-Hungary took a very small quantity of cotton hosiery, probably samples. All of the countries took cotton hosiery, but only 36 received artificial silk, and most of these in small quantity.

## Taking Up the Slack.

In a time of high labor cost and a lack of suitable supply—the two usually go together—it is necessary for mill managers to cut every corner in order to get the mill production anywhere near a suitable figure. Beginning as a war-time difficulty and continuing right up to the present the shortage of wash-women in mill villages has created much trouble among the workers by necessitating a woman worker in many families to remain away from work one day each week to do the family laundry.

Suppose a mill village consisted of 600 families and 50 per cent of them were so situated that a worker had to remain at home one day each week to do the washing and ironing. That means 3000 hours are lost to the mill each week or 156,000 hours per year.

A few employees aided by a complete installation of modern laundry machinery can do these three hundred weekly washings and ironings more easily than the three hundred mill employees can do them. They can also do them better and without spoiling the beauty of the village with unsightly kettles, wash tubs and clothes lines. Furthermore, the profits on the full-time production for this 156,000 hours will more than compensate for the necessary investment cost for suitable machinery.

The mill village laundry assists in securing welfare work ideals and yet it is strictly a business proposition. A small profit should always be charged by the mill as the average mill employees of today do not want, nor do they need charity. The present is a time for taking up slack and a suitable laundry equipment has pointed the way in more than one mill during recent months.

# Knitters Meet at Whittle Springs

President Tom Johnston did it.

When the call for the meeting of the southwestern division of knitters on September 9th was sent out, it stated that the convention was to be held at Whittle Springs. Immediately the question arose in the minds of those deciding to attend, "Where is Whittle Springs?" Superficial inquiry proved unavailing, but careful investigation disclosed that it was a suburb of Knoxville, Tennessee, and was easily reached by trolley or automobile from that city.

Arriving delegates found that President Johnston, in his new role of discoverer, had found an uncharted beauty spot in the Tennessee hills, where there is a thoroughly modern and really fireproof hotel, fully equipped with automatic sprinklers, in addition to all the other appointments of an up-to-date hostlery catering to the pleasure and rest-seeking public. In addition to the features usually found at such resorts, Whittle Springs has four excellent springs, providing water containing many medicinal properties; also the largest outdoor swimming pool in the South. This latter feature, which was a special source of joy to the visiting knitters, is a large cement lined pool, 180x80 feet in size, and provided with filtered water which is sterilized by the "Violet Ray" process before pouring through the pool. A specially designed safety pool is fenced off at one end of the main pool, with a depth of water of but one to three feet, where the kiddies may paddle to their hearts' content. The balance of the pool ranges from four to eleven feet in depth, and is provided with all the necessary devices for the convenience and pleasure of those who swim, either as a sport or a pastime.

WHITTLE SPRINGS HOTEL, THE CONVENTION HEADQUARTERS.

National Secretary C. B. Carter, of Philadelphia, who was in attendance, was greeting his many friends and acquaintances. As Knoxville is the home of his boyhood, these friends were legion and the morning hours before the session developed into an informal reception on the broad, cool verandas of the hotel.

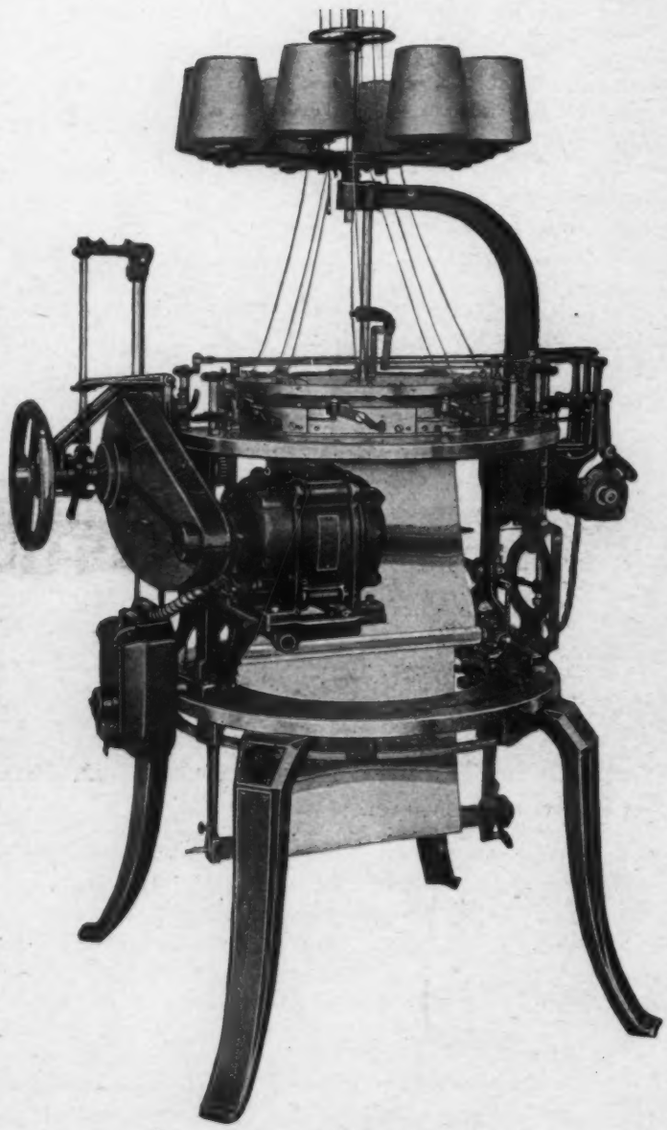
About 75 knitters were present when the first session was called to order in the Club Lounge at 11:15 on Tuesday morning. President Thomas H. Johnston, of the National Association of Hosiery and Underwear Manufacturers, presided.

The president called attention to the fact that this was the first meeting in the Association year for what might be termed the "southwestern knitters," to differentiate them from the Carolina meetings, which were known as the "southeastern knitters." He then introduced the Hon. T. A. Wright, of Knoxville, who, besides being a prominent attorney of that city, is also connected with a number of knitting mills, to deliver the address of welcome to the city's visitors.

Judge Wright spoke of the unusual conditions prevailing because of the reconstruction period, and stated that it was his belief that the majority of business men were not giving sufficient thought to the great issues before America today. He declared that he thought it was the duty of every man to study the big national questions, and be prepared to act upon such questions intelligently, otherwise the wrong kind of men, the kind of men that favor the Plumb railroad plan, for example, will be in the saddle and will remake the country along shallow and ill-thought lines.

The speaker also expressed it as his sincere belief that mill managers should get into closer contact with the people at the mills, the operatives. Less production and more pay, he pointed out, is the cry of labor today. He stated frankly that knit goods at present are too high, but it is because of this attitude on the part of labor, added to the profit of the jobbers and retailers, who also are sure to "get theirs." However, he prophesied, there is a new day coming. When it arrives, the country will never be as it was before, but entirely different and remade along comparatively new lines. It was for this reason that he so earnestly advised all business men to get in touch with national questions and help to remake the country on these new lines rather than have it made on the Bolshevistic lines that might otherwise prevail. The speaker closed his ad-

# Wildman Motor Drive



Drive on Bathing Suit Machine
Back View.

Look this drive over, and then go out in your knitting room and form a mental picture of how it would look if all the machines were equipped with Individual Motors. Dangerous belts and unsightly line shafts done away with, bettering the light and adding to the convenience of the knitting department.

But the improved appearance of the knitting room is not the only advantage. The motor drive increases the production of the machines 10 to 15%, as the loss due to belt slippage is entirely done away with.

The drive can be attached to a Wildman Belt Driven Machine in a half hour's time, by simply taking out the old side and slipping in the new drive complete. No drilling or tapping is necessary.

## WILDMAN MFG. CO.

**ESTABLISHED 1889** **NORRISTOWN, PA.**

dress with a few words of hearty welcome to the visiting delegates.

President Johnston then introduced Champe S. Andrews of the Cotton States Knitting Mills of Chattanooga, and Chairman of the National Association Committee on uniform order blanks and arbitration rules. Mr. Andrews first delivered an informal report of progress for the committee, and stated that, up to the present time, five of the affiliating associations had appointed committees to work with his committee.

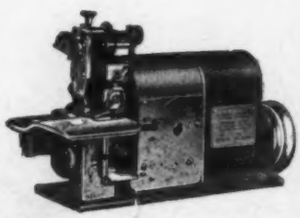
After the submission of this informal report of progress, Mr. Andrews began his more formal address by commenting upon the fact that national conventions of great political parties were usually opened by a speech on the part of some one carefully selected member who made what was usually termed a "key note speech" around which all the other speakers developed their remarks. "This morning," he continued, "Judge Wright has sounded the key note, and it is 'national conditions.'" The speaker pointed out that in his opinion, business men do not study to a sufficient extent, the broad underlying laws that govern the universe. They take such laws too much as a matter of course. "In order to illustrate my meaning in this matter," continued the speaker, "let us consider the moon that

Top Left, the Swimming Pool From the Dancing Pavilion. Top Right, Inside the Enclosure at the Swimming Pool. Dancing Pavilion and Hotel in the Background. In the Center, Some of the Knitters. At the Bottom, John M. Reynolds, of Boston, Diving. At the Extreme Left He Lost His Head.

# MERROWING

ESTABLISHED 1838

MAKERS OF



THE MERROW HIGH SPEED OVERSEAMING OVEREDGING and SHELL STITCH MACHINES

FOR SEAMING HEMMING & EDGING

ALL KINDS KNITTED & WOVEN FABRICS

# MERROWISE

FOR EFFICIENCY IT MEANS

**Maximum Production**

**Minimum Expense**

**Unexcelled Quality of Work**

## The Merrow Machine Co.

16 Laurel St., Hartford, Conn., U. S. A.

illuminated the sky so beautifully last night. It was then what we call a full moon, but in a few days, it will dwindle away until it becomes the last quarter and then will go out of sight entirely to again appear at a later date as a new moon and continue the cycle to the full moon once more. How many of you know the fundamental law controlling this? How many of you know the law of the tides of the ocean? You all understand that when an apple is thrown in the air it immediately falls again to the ground and if asked about it you will immediately state that it is the law of gravitation, but who among you can tell in plain words just what this law of gravitation is and why it acts?

"This whole matter develops into the law of cycles, and that is what we manufacturers need to study. The law of the Golden Rule, which we have discussed at previous meetings is really a law of cycles. We get what we give and we give what we get. Let me read you a quotation covering this law:

> "'The law of equal and opposite reactions applies to economics and human relations, en masse, as it applies to mechanics. Thus, we assume that abnormal depression must follow abnormal activity or vice versa; that lower prices must follow higher prices or vice versa; and that we as classes or nations, must ourselves get what we give and must prosper as we serve.'
>
> "'In its fullest sense, the Law of Equal Reaction is that, for every act, word or thought, there is a reaction upon the person, class or nation, from which it goes. In other words, the world pays us in the same coin which we ourselves use. Today the application of this law to human relations is little understood. A great development along social, industrial and international lines, however, is coming about in the near future through a recognition of this principle. Some day, it will become the foundation even of religious teaching, as the Golden Rule is based strictly on this fundamental law.
>
> "'Once the nations of the world were dependent upon their armies. The nation with a Caesar or a Wellington ruled supreme; later the statesmen ruled and a nation which had a Pitt or a Bismarck determined the world's policy; but today the commercial interests of the nation dictate our destiny. The credit of our country, or of any country, during the next ten years will not depend upon its armies or its statesmen, but rather upon the character of its bankers and merchants.'

"Therefore, as I see it, it is our duty as business men to study these questions and train ourselves to diagnose them correctly, and if possible, to forecast social and business conditions for the future in order to guide safely our great industrial and financial enterprises upon which the future of our nation is so dependent."

The speaker called attention to the fact that Harvard College and the United States Government were both making extended studies and conducting research work in an endeavor to chart past history from the standpoint of this Law of Cycles. The length of time which a cycle of rising prices ordinarily takes to reach the top and the length of time that cycle continues before a decline in prices sets in produces part of the cycle, which with the decline brings us back, through its reactionary program, to the original starting point from which the next cycle will start.

In further discussing the present trend of prices and of business, Mr. Andrews further developed this Law of Cycles in business as caused by the operation of this law of action and reaction. He showed that for many years the country has experienced a period of great activity, heightened by the war, and that in all lines of commerce, activities had been greater than ever before. It was, therefore, only natural, he pointed out that a reaction should set in some time in the future. Just when that period of reaction would begin was something that every man would have to decide for himself, and it was something that, in his opinion, would not begin abruptly. He indicated that investigation of this Law of Cycles had demonstrated that the signs were always the same when the end of a period of intense activity was approaching. Prominent among these signs, he made the following classifications:

(a) *Decreased production.* That production has already begun to fall off, every one knows.

(b) *Greatly increased wages.* It is also evident that people in every walk of life are trying to get something for nothing, and these greatly increased wages when combined with shorter hours indicate that trend.

(c) *Strikes.* Strikes are an indication of this same tendency, and are always in evidence during periods of great prosperity.

(d) *Agitation against the high cost of living.* Such agitation has been in progress since 1912, as one of the campaign planks of the Democratic party in that year was on the subject of the high cost of living, and President Wilson, in his first inaugural address, also referred to this particular feature. This agitation has continued throughout the period of the war and it is still continuing.

(e) *An orgy of extravagant buying.* This undue purchasing of expensive articles naturally applies to individuals and their private life rather than to the business trend, but expansion might be cited as another feature of this same sign of the period.

The speaker illustrated this particular feature of his address by pointing to the fact that four more mills are going up in Chattanooga at the present time and he might have added, with equal truth, that new mills are going up in other sections of the South almost in the same proportion.

The important thing to know in connection with the foregoing signs and this theory of cycles is just when the period of activity will end and the period of depression set in. As already indicated, the speaker pointed out that, in his opinion, this would not come abruptly. It is something that each individual must forecast for himself, and it was for this particular reason that the speaker advocated the study of this universal Law of Cycles, so that each individual manufacturer would be ready for the inevitable decline when it finally did arrive. It is one of those occasions where there is no need for pessimism, but a careful study of the situation will go far toward discounting the whole problem so that in the final outcome no serious trouble will result.

At the close of Mr. Andrews' address, President Johnston congratulated him upon his address and also upon his work as chairman of an important committee, and was reminded by these things of the Rotary slogan, "He Profits Most Who Serves Best." He indicated it as his belief that business men should be more practical. "We may preach," he said, "but unless we practice, little good will result." A resolutions committee consisting of Garnett Andrews, Harold Lamb, and J. M. Berry, was then appointed by the president and the morning session adjourned at 1:00 o'clock to attend a special luncheon in the main dining room of the hotel.

WHITTLE SPRINGS HOTEL, FINEST RESORT AND AMUSEMENT CENTER IN THE SOUTH

# WHITTLE SPRINGS HOTEL

3 Miles from Center of Knoxville, Tennessee.

## Where Service Accommodation And Cuisine Reign Supreme

**FINEST and Most Modern Up-to-Date All Year Round Hotel in the South. 125** Rooms—Handsomely Furnished—Hot and Cold Running Water, Public and Private Tub and Shower Baths, Electric Lights, Private Phones, Electric Elevators, Automatic Sprinkler System, Largest Dining and Assembly Rooms in the city. A Convention Hotel, catering to Tourists, Automobile Parties, Travelers and Week Ends.

Dancing, Golfing, Automobiling, Out-Door Swimming, Largest Out-Door Swimming Pool in America, Water Filtered and Sterilized by Violet Ray Process. No Malaria. Cool Mountain Breezes, Beautiful Scenery, Modern Equipment, on Main Line Southern and L. & N. Railroads. Private Taxi and Baggage Transfer Service. American Plan, $5.00 per day and up. European Plan, $2.00 per day and up. Send for Big Illustrated Booklet. Write or Wire for Reservations.

**Whittle Springs Hotel, Knoxville, Tenn.**

## The Afternoon Session.

The afternoon session was called to order by President Johnston at 3:00 o'clock. The president addressed the association briefly, saying in part as follows:

"We have met today to council together, feeling that our meeting will cause a better understanding of the conditions that we are face to face with and feeling that our problems can best be solved by mutual interest and cooperation.

"Our annual convention held in Philadelphia in June was a splendid success. The attendance was most excellent, except from the southern division, which I am sorry to say, was not quite up to the standard in numbers. The only reason we can ascribe for this is, that you had plenty of business and probably had your hands and minds full. I want to take this opportunity to urge and impress upon each member the importance of attending these annual meetings which, as you know, are held in Philadelphia each year. The date of our next annual meeting will be in the last week of April, 1920.

"We had a splendid meeting of the Executive Board of the National Association at Atlantic City in July which was very well attended. I cannot refer to this meeting though without feeling keenly a pang of deep grief, for I am reminded that at that time, we had with us our very much beloved and very much esteemed ex-president, Mr. P. C. Withers, of Mt. Vernon, Ill., who though ill at the time, attended this meeting and took special interest in the proceedings. He gave little attention to it at the time, but on consulting a physician, he was ordered to bed and was quite ill for several days at the Ambassador Hotel. I spent several days in Atlantic City and visited him often. He seemed to materially improve and was removed to the St. Luke Hospital in New York for further treatment. Later on, it was found that a slight operation was thought to be necessary. After undergoing this, he passed away on August 2nd. I would not cast the slightest gloom over this meeting, but I cannot help but feel keenly this loss and I am sure that all the members of our association in which he was so much interested, will also feel this loss deeply.

"At our meeting in Atlantic City, we had before us the Longworth Bill No. H R 8078, which was before the Ways and Means Committee of Congress. This bill was very adroitly drawn and we recognized this as very dangerous to the textile industry as well as all other industries interested in the use of dyes. This bill was drawn with a view of creating a dye licensing commission and was so worded as to prevent any foreign dyes coming into this country for a period of five years unless by consent of this commission.

"This commission, as originally reported, was to consist of five manufacturers of dyestuffs, three practical dyers and three users of dyes. Without further comment, you can see the manufacturers of dyestuffs had this bill entirely in their favor and the consumers of dyestuffs had little or no voice in the matter.

"We had with us at this meeting, the leaders of manufacturers of dyes and from investigation, we were fully convinced that 85 per cent of the American dyestuff industry is practically controlled by one firm who are very insistent and who had been very insistent for some time in getting this bill through and if it had gone through just as it was worded, we felt the monopoly would have been entirely in their hands.

"Up to that time, no association had taken any definite action in opposing this bill. We took the initiative in passing strenuous resolutions opposing this bill, but favoring that the American dyestuff industry be safeguarded by a protective tariff and I am glad to say that since our action, practically every national association interested in the use of dyes has followed ours and has joined us in the protest. The Shirt Association, the Silk Association and, I understand, the Wool and Cotton Association, as well as the Paper and Pulp Association have taken similar action.

"After drawing these resolutions, we immediately got in touch with Mr. Fordney, Chairman of the Ways and Means Committee, and through the Eastern Pennsylvania Representative in Congress, Mr. J. Hampton Moore, our resolutions were presented to the Committee.

"We have not succeeded in doing away entirely with the Licensing Commission, but I feel in a great measure we have been successful for this bill now provides for extending license for importing dyestuff for a period of only two years, to be governed by a commission of eleven members and of this commission of eleven, seven of the members are to be consumers of dyestuff, three from the American Dye Institute and these ten commissioners are to elect the remaining commissioner, who shall be a person not actively connected with an industry which manufactures or consumes a product covered by the act and who shall be chairman of the commission, so you see from this, if we are to have a commission, the majority is now in the hands of the consumers of dyes and not the manufacturers of dyes, who first held the control or were likely to hold it from the first bill.

"We are still opposing this bill, believing that the dyestuff industry can be adequately safeguarded by a protective tariff and that a licensing commission is not necessary. We want to be free to get the dyestuffs that other countries are getting without having this red tape and 'round about method of going through a commission to get the dyes that we need and must have to enable us to compete with other countries. England is getting foreign dyes and up to this time, the American plants have not been able to produce satisfactorily some of the dyes that we really need. I refer particularly to developed black and several high colors which we must have to compete with the world and to keep the American quality of manufacture up to the highest standard, and until America can and does satisfactorily produce these goods at home, we must be able to get them quickly and promptly from foreign countries to meet the world's competition.

"I trust at this meeting that we will endorse the resolutions passed in Atlantic City and also the resolutions passed by the Pennsylvania Division of the National Association of Hosiery and Underwear Manufacturers which held their meeting a short time ago, so that every division of our association can be a unit in opposing and protesting against a licensing commission governing the importation of dyes, but recommend that the dyestuffs industry be adequately safeguarded by a protective tariff.

"The Bureau of Foreign and Domestic Commerce, at Washington, several weeks ago, called our Association's at-

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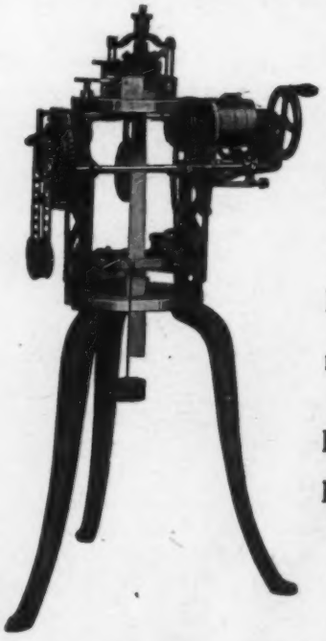

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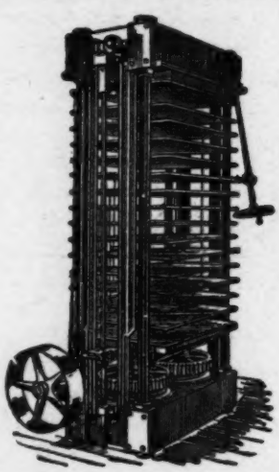

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FOR

Hosiery and Underwear

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tention to several irregularities and complaints they had had from foreign buyers as to the quality of goods that American manufacturers were sending abroad, misrepresenting the character and quality of the goods that were shipped and a representative of the Association went to Washington and investigated thoroughly this whole matter and carefully looked into this complaint.

"We found that practically all of them came from irresponsible people and practically none of them were from manufacturers, but from middle men who represented themselves to be manufacturers' agents or identified with the manufacture of textiles.

"We (your directors) at our meeting at Atlantic City, considered this matter very carefully and passed strong resolutions condemning a practice of this kind and we agreed to make up a list of the reputable manufacturers of textiles in this country on whom foreign buyers could rely, and file this with the Bureau of Foreign and Domestic Commerce, requesting that the Bureau of Foreign and Domestic Commerce refer to us any complaints of this character, and they would have our careful investigation and we promised the best cooperation of our Association in handling matters of this kind in a way that will be mutually helpful and profitable to the American manufacturers and to prevent any stigma of this kind resting on the good name of the reputable manufacturers of this country.

"Now, gentlemen, coming down to the present, since the early revival of business, which came about the first of April, there is no disputing the fact that there has been a very healthy demand for hosiery and underwear. Unfortunately, some of the mills were tempted to take business during the quiet period from the signing of the armistice until the early Spring month referred to above and they were forced to sell these goods at comparatively low prices in order to keep their mills going and to keep their organizations together. Many of them expected to work out of these orders much sooner than they have been able to do, for the reason that they have not been able to get normal production, due to the indifference on the part of labor to work. I say indifference on the part of labor, for the reason that I do not believe that there exists such a great scarcity of labor in this country, as it is a disposition on the part of such labor not to work. I believe that you will all bear me out in this statement that what we need today is not more labor, but a greater production per unit of labor. This exists not only in the United States, but throughout the world.

"The world seems to have become intoxicated with the idea that in the past, they have been working too much and resting too little—saving too much and spending too little. We may talk all we please about reducing the high cost of living and of legislating in different ways, but, gentlemen, until the production catches up with the consumption, I fail to see where there can be any great reduction in prices. When food stuffs are plentiful, that is, when the production is greater in Europe as well as this country, the cost of living will be reduced, competition will become greater and the inexorable law of supply and demand will prevail and natural adjustment of conditions will follow.

"In view of the large issue of Liberty Bonds and the natural inflation as a result of the war, which we all recognize and which has been regarded by some as a financial anaesthetic under the influence of which people have seemingly become insensible for a time to the economic distress throughout the world, the whole country seems to have become dissatisfied and bent on seeing how little they can work and how much pay they can get for it, disregarding entirely the necessity of production and failing to realize that only production will bring lower prices and more helpful conditions. Until people realize that our problems can only be solved by industry and economy, or by working and saving, we will never satisfactorily solve the problems that are confronting us."

At the conclusion of the president's address, Harold Lamb, of the Resolutions Committee, reported the following resolutions, which were unanimously adopted.

*Whereas*, in the death of P. C. Withers, of Mount Vernon, Illinois, the knit goods industry has lost a leader, and the hosiery manufacturers a friend and counselor of proven value at all times, now,

*Therefore, Be it Resolved*, That the Southern Association of Hosiery and Underwear Manufacturers express the deep regret of the entire industry at his untimely loss. During the present period of reconstruction, when as never before men combining a keen and discriminating vision, with the courage to follow their conclusions, are needed on every hand, his death has removed one whose time and talents were always at the disposal of the industry as a whole, and his advice and experience at the command of any man who sought his help. His kindness of heart and his sympathetic courage will be missed by all who worked and served in the vineyard with him.

*Be it further Resolved*, That we express our sense of loss at his death, and extend to his family the sincere sympathy of this Association as a whole and of every individual member.

*Be it Resolved*, That a copy of these resolutions be sent to his family and also to the National Association of Hosiery and Underwear Manufacturers, there to remain as a permanent expression of our high regard and esteem for the memory of our departed brother.

*Whereas*, one of the fundamental causes underlying the present high cost of living, is the decrease of production in all lines of manufacture, resulting in mounting prices, and increasing scarcity of merchandise,

*Therefore, Be it Resolved*, That we give our hearty support and encouragement to all movements tending to increase production, and especially to the movement known as "Work An Extra Hour More a Day." The spread of this movement to all classes of employees will bring about in the quickest way possible a decrease in cost, an increase of production and a lowering of the cost of living.

*Whereas*, industry to be permanent and stable must be free from all abnormal restrictions, and governed by the natural laws of supply and demand,

*Therefore, Be it Resolved*, That we oppose the proposed Dye Licensing Commission as being opposed to the all sound principles of business and especially those principles of American independence in trade, upon which our industries have traditionally grown and prospered.

The balance of the session was devoted to round table discussions on a variety of subjects of interest to knit goods manufacturers. One member stated that a greater number of export inquiries were being received than for some time past. Attention was called to the fact that England's wages are higher in proportion than those of this country and that yarns cannot be imported.

Another member present called attention to the fact that New York manufacturers are utilizing colored labor to a large extent, more so than is the case in the South. The question of foreign exchange came in for considerable discussion as did the question of an allowance for rise and fall. The general consensus of opinion seemed to be that a rise of 15 cents on a fall of 10 was about right. However, it was found that this price allowance varied among the different manufacturers and upon different lines of goods manufactured.

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# Among the Knitting Mills

The Palisade Hosiery Mills, 487 Central Avenue, West Hoboken, N. J., have been incorporated with a capital of $25,000 to manufacture hosiery. S. H. and D. Simsarian and Jacob A. Stone are the incorporators.

The Leinbach Brothers Knitting Company, Reading, Pa., has recently filed articles of incorporation with a capital of $25,000 to operate a local mill for the manufacture of knit goods. Charles M. Leinbach, 525 Weiser Street, Reading, Calvin M. Leinbach, 5918 Washington Avenue, Philadelphia, Pa., and John E. Leinbach, Stony Creek Mills, Pa., are the incorporators.

Plans have been completed by the Crown Mills Company, Marcellus, N. Y., manufacturer of knit goods, for the construction of a new one-story mill, about 35 x 45 feet. The structure is estimated to cost about $9,000.

The Cowen Hosiery Company, Inc., New York, has been incorporated with a capital of $250,000 to manufacture hosiery and underwear. E. D. Cowen, M. B. Bried, and Peter Samuels, 158 West Twenty-seventh Street, are the incorporators.

The Moorhead Knitting Company, Harrisburg, Pa., has completed arrangements for the erection of a proposed new four-story, brick and concrete addition to its plant at Cameron and Walnut Streets. The structure is estimated to cost about $75,000.

The Hopateong Hosiery Company, Washington, N. J., is making rapid progress on the construction of its new local plant and it is expected that work will be completed at an early date. Oscar E. Markle is president.

The Twin Oak Knitting Mills, Inc., New York, has been incorporated with a capital of $10,000 to manufacture knit goods, etc. Herman A. Charney, A. Benjamin Charney, and Herman Levy, 104 West One Hundred and Sixteenth Street, are the incorporators.

The Rockland Hosiery Mills, Allegheny and Kensington Street, Philadelphia, Pa., is understood to have completed arrangements for the erection of a new plant on Kensington Avenue, near O Street, to consist of main two-story and basement mill, 50 x 327 feet; one-story dye house, 42 x 65 feet; one-story boiler and engine plant, 42 x 50 feet; and two-story brick office 32 x 60 feet.

The Pearl Knitting Company, Inc., New York, has been incorporated with a capital of $20,000 to manufacture knit specialties. Jacob Morris and B. Weinstein, 26 East One Hundred and Eighteenth Street, are the incorporators.

Notice of organization has been filed by the Spear Hosiery Company, Newark, N. J. Frederick Spear, 16 Dassing Avenue, and Samuel Sudfield, 193 Barclay Street, head the company.

Plans have been prepared by the Modern Textile Company, Harrisburg, Pa., for the erection of a new two-story mill at 1815 Penn Street. The structure will be about 25 x 81 feet and will cost $15,000.

The Gloversville Knitting Mills Company, Gloversville, N. Y., has recently completed negotiations for the purchase of the Congress Theater Building, Schenectady, N. Y., and has commenced remodeling and improvements for the establishment of a new branch plant. The work is estimated to cost about $25,000.

The Integrity Knitting Company, Philadelphia, Pa., recently incorporated, has completed negotiations for the leasing of the entire second floor at 335 Market Street for its new works. S. and B. Marku, and P. and A. Kuhn are the incorporators.

The O'Shea Knitting Mills, Chicago, Ill., have filed notice with the Secretary of State of an increase in their capitalization from $30,000 to $100,000, to provide for general business expansion. D. C. O'Shea is president and Joseph R. Begg is secretary.

J. L. Gibson, Bryson City N. C., is understood to have completed arrangements for the construction of a new brick and concrete knitting mill, about 50 x 100 feet.

The Minneapolis Knitting Works, Minneapolis, Minn., have recently filed notice with the Secretary of State of an increase in their capital from $350,000 to $600,000, for proposed business expansion. The company specializes in the manufacture of children's and infant's underwear. W. H. Thorp is president.

The Phoenix Underwear Company, Phoenix Mills, N. Y., has completed arrangements for the erection of a new two-story dye house at its plant, about 30 x 50 feet. The structure is estimated to cost about $12,000.

The Princeton Knitting Mills, Richmond, Va., manufacturer of bathing suits etc., is understood to be considering plans for the erection of new addition to its plant, to provide for increased capacity. It is said that the present output of the works will be practically doubled.

The Green-Haas-Schwartz Company, Euclid Avenue and Fifty-seventh Street, Cleveland, O., manufacturer of fancy knit goods, etc., has completed negotiations for the purchase of property on One Hundred and Fifth Street, near St. Clair Street, to be used as a site for the construction of a new mill.

The Stitchbound Hosiery Mills, Reading, Pa., have completed arrangements for the purchase of the plant of Worley Brothers, Mohnton, Pa., manufacturers of cotton batting. It is proposed to install new equipment in the structure and use it as a branch establishment.

A hosiery mill with $100,000 capital has been incorporated at Bristol, Va. by James P. Grey of Johnston City, Tenn., and others. The plant will consist of two buildings of brick to be installed with the latest models of knitting machinery and will have an automatic sprinkling system. The plant will be electrically driven and will have a daily capacity of 1,000 dozen pairs of hosiery. J. E. Sirrine, of Greenville, S. C., is the architect.

The Loudon (Tenn.) Hosiery Mills are to erect an additional building at their branch at Newport, Tenn. It is to be a modern factory building 60 x 130 feet.

The Rosenau Hosiery Company, Tuscaloosa, Ala., has ordered $25,000 worth of machinery to equip a plant at Northport, Ala., for the production of 500 dozen pairs of hosiery daily.

The Southern Hosiery Mills, Chattanooga, Tenn., have been chartered with a capital stock of $10,000. Champe S. Andrews, S. J. McAlester and Fred Frawley are among the promoters.

The Union Mills Company is the name of a new knitting mill which is developing at Knoxville, Tenn.

The Gem Hosiery Company, Norfolk, Va., has been incorporated with a maximum capital stock of $25,000. It is organized for the purpose of manufacturing, buying and

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selling men's, women's and children's hosiery. D. Laibstain is president and B. Jielson is secretary.

The Osigian Silk Hosiery Mills will be the name of a silk mill to be organized in New Orleans, La., with a capitalization of $1,000,000 to manufacture silk hose. A two story building is to be erected and in its basement will be an incubator plant for silk worms. S. Odenheimer, president of the Lane Cotton Mills, will be president of the new firm, of which Dr. V. K. Osigian, a Syrian, is the promoter.

The Valdese Manufacturing Co., Glen Alpine, N. C., will increase its capital stock from $125,000 to $300,000.

The Elco Silk Mills have been incorporated at Albany, N. Y., with a capital of $30,000. The incorporators include Arthur Shaw, Edward J. Guinane and D. E. Lorentz.

The Classic Hosiery Co., with a capital stock of $25,000, is a firm recently organized and incorporated at Reading, Pa., to manufacture knit goods in general. Among the incorporators are R. K. and A. L. Bodenhorn and F. E. Guenther.

The United Hosiery Mills, Bristol, Tenn., will build an addition to be equipped for dyeing knit fabrics. It will be one-story of brick and concrete construction, 110 x 60 feet.

The Davenport Hosiery Mills, recently organized in Chattanooga, Tenn., to manufacture ladies' silk hosiery, is expected to be in operation in about two weeks. T. Walter Fred, who was formerly with the Nick-a-Jack Hosiery Mills, at Chattanooga, will be treasurer and general manager of the new plant.

The La Belle Manufacturing Co., located at 1131 Wharton St., Philadelphia, Pa., is a new concern about to place on the market a novelty to be known as Lafayette health underwear consisting of a knitted union suit or separated garment with an abdominal girdle or support attached. It will also be made up in nainsook and similar materials. The business is owned and managed by Louis & Isadore Green who for the present will sell direct and subsequently through jobbers. The Lafayette health underwear was exhibited and demonstrated at the recent Philadelphia-made goods exhibition held at the 1st Regiment Armory, where it met with unusual favor.

The Elite Hosiery Co., of Mahanoy City, Pa., has been incorporated for $50,000, to make ladies' seamless silk hosiery. The new plant will be located at 1806 East Venango St., Philadelphia. The incorporators are: Thos. F. Ryan, Bernard Fitzpatrick, W. J. Ryan, Attorney, Peter McCarron and Dr. J. R. Bissell. The Wildman Pidgeon machine will be used. The above concern expects to begin operations November 1st.

The Franklin Process Co., of Providence, R. I., has purchased the plant of the Angola Dyeing Co., located at Hope and Clearfield Sts., Philadelphia, and will operate same as a yarn dye plant dyeing yarns in the well known Franklin Process dyeing machine. The plant will be in full operation about November 1st. At present all communications are being addressed to 931 Drexel Bldg., Philadelphia.

The Durham (N. C.) Hosiery Mills will build a steel and concrete building six stories high and about 115 x 255 feet, in which will be installed complete equipment for the manufacture of silk hosiery. The machinery will be driven electrically. J. E. Sirrine of Greenville, S. C. is the engineer.

The Middlesborough (Ky.) Towns and Lands Company plans to start a knitting mill to manufacture hosiery in the gray and later add a dyeing plant.

Lynchburg (Va.) Hosiery Mills will build a one story addition.

The Dillon-Kearns Underwear Company, High Point, N. C., has been organized with capital of $100,000 to erect plant to produce underwear.

The Newbern, N. C., Chamber of Commerce announces a new hosiery mill to be established there by out-of-town interests.

J. F. Long, President, Athens (Tenn.) Roller Flour Mills, contemplates building a hosiery mill.

J. T. Justice, Bennettsville, S. C., is contemplating starting a new hosiery mill there.

Establishment of a hosiery mill is reported contemplated by the Golden Belt Mfg. Company, Durham, N. C.

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Hosiery manufacturers are always looking forward to and investigating new machinery that will increase the efficiency of their plants and speed up production. This is especially true at this time when most of the mills are running at full capacity and there exists such a demand for their products.

An entirely new method of finishing hosiery has been adopted by many of the hosiery manufacturers throughout the country. This new method, which is the most up-to-date way of pressing hosiery, is by the use of a rotary press where the hosiery is laid on a moving apron, carried into the machine and passed between steam heated chests and large pressure rolls. Here the hosiery is subjected to a very heavy pressure, the amount of which depends upon whether it is passed through the press singly or in pairs. After passing through the press the hosiery is stripped from the apron at the receiving side by the operators.

By using this press all heavy lifting is done away with and the operators can sit down and feed the hosiery without any exertion. The capacity of the machine is claimed to greatly exceed that of any other method and all hosiery manufacturers looking for more efficient pressing equipment will do well to investigate the new rotary hosiery press.

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The Hyatt Roller Bearing Co., Metropolitan Tower, New York City, has recently issued a new Engineering Bulletin, No. 125, a 20-page booklet. This bulletin gives complete engineering data on Hyatt roller bearing hangers for use on line shafting. In addition to furnishing prices and dimensions of boxes and cranes, it gives useful transmission data on the size of shafting for transmitting various horse power, the proper speed of line shafting, and contains information to enable any practical man to intelligently select the right kind of transmission material and to erect it in such a manner as to transmit the maximum of power from the driving units to the machines.

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A unique folder is being mailed out by S. F. Bowser & C., Inc., Fort Wayne, Ind., illustrating and describing a Bowser battery storage system for lubricating oil. The folder can be arranged to show one, two, or three outfits or an entire battery of four tanks, so that the prospective customer may understand that he can buy as many units as he requires and the folder will show him how the units of any various capacities line up in uniform manner. The Bowser tanks are made with steel walls, thus eliminating the loss of oil sustained by the porous walls of a wooden barrel soaking up part of the contents.

## Ginner Delegates.

(*Continued from page 840.*)

### GEORGIA

Ed Stevens, Dawson
S. J. Stubbs, Douglas
J. A. Sturgis, Warrenton
J. W. Summerour, Winder
T. R. Talmadge, Forsyth
W. S. Tigner, Stovall
A. N. Tumlin, Cave Springs
C. D. Tyler, Arlington
A. B. Van Valkenburg, Lisalle
H. G. Vaughn, Conyers
H. W. Warnock, Soperton
C. K. Watson, Wellston
W. D. Wisdom, Chipley
J. D. Wood, Winder
J. H. Woodall, Milner
Thomas Wray, Wrayswood

### LOUISIANA

J. L. Bryan, Natchitoches
N. R. Cotton, Jonesville
G. B. Davis, Clarence
A. H. Gillispie, Vidalia
John H. Henry, Melrose
Ambrose Hertzog, Chopin
C. V. Hunt, Delhi
J. J. Lay, Gilliam
J. E. Lefluer, Ville Platte
L. L. Lemoine, Cottonport
W. D. Lyles, Cheneyville
Charles Manning, Cheneyville
J. T. McDade, McDade
Aldo Miller, Natchez
W. H. Pace, Athens
E. O. Payne, Natchitoches
M. G. Pearson, Farmersville
W. S. Peck, Sicily Island
A. B. Pendleton, Alexandria
Randalph Pepes, Clinton
E. B. Saunders, Tallulah
Foster Smith, Campti
T. H. Thurmond, Shreveport
B. Y. Wade, Frogmore
J. H. Williams, Natchitoches
A. L. Wilson, Arcadia
J. G. Wilson, Homer
George S. Yerger, Mound

### MISSISSIPPI

J. Aldridge, Burdette
L. P. Aldridge, Greenwood
A. B. Archer, Grufger
E. Arrington, Brookhaven
J. T. Atterbury, Estill
Lee Baggott, Oxford
W. H. Brown, Glen Allen
Lloyd Browning, Tibbee
R. E. Burke, Tollatoba
B. F. Cammack, Rockport
R. G. Coleman, Percy
W. D. Corley, Tutwiler
George C. Cortright,
Dr. J. T. Darden, Blanton
W. L. Dobbs, New Albany
Dr. W. L. Fatherly, Winterville
H. J. Fields, Onguilla
W. C. Gills, Catchings
T. Z. Hall, Glancy
W. S. Hankinson, Yokema
L. C. Hays, Hollendale
A. P. Herron, Oakland
J. C. Hoagland, Longwood
Silas Kell, Belen
W. W. Kemp, Corinth
M. C. Kimmins, Kossuth
C. K. Kirkland, Morgan City
P. L. Mann, Glen Allen
W. C. McCaughen, Hampton
N. J. McMullens, Sumner
R. M. McWilliams, Clarksdale
Harley Metcalfe, Metcalfe
E. K. Middleton, Pocahontas
Dr. H. R. Miller, Lamont
J. B. Moore, Inverness
J. T. Nason, Grenada
W. C. Neals, Heads
O. C. Neill, Whaley
W. H. Neill, Whaley
E. C. Newsome, New Hebron
L. G. North, Pettit
L. J. Northington, Greenwood Springs
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E. M. Oden, Starr
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P. J. Tonnar, Grace
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B. G. Waldon, Prentice
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Charles P. Williams, Greenville
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S. H. Averett, Garner
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R. L. Dickens, Whitakers
C. P. Ellis, Clayton
W. D. Fuller, Woods
R. A. Gardner, Fountain
M. A. Geddie, Lumberton
W. A. Gladen, Patterson Springs
C. L. Hardy, Maury
R. K. Hollifield, Forest City
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John P. Borden, Ennis
H. C. Buck, Washington
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(*Continued on page 829.*)

# "Liquid EBG Chlorine"

## The only 100% Efficient Bleaching Agent

WHY waste time and money preparing your own bleaching solutions from lime?

WHY run the risk of yellowing and tendering your goods?

WHY pay excessive freight charges?

The most simple process of bleaching,—the bleach that contains 100 per cent available chlorine—the bleach that diminishes the harshness in your goods and increases the tensile strength is

### E. B. G. LIQUID CHLORINE

**READ WHAT THESE WIDE AWAKE MILL MEN SAY ABOUT IT!**

"We have thoroughly tested out your Liquid Chlorine on a practical scale and find that it is very satisfactory. We anticipate that it will not only give us a considerable saving in the price of our bleaching, but it also gives us a better white than our old method with bleaching powder, and finally the bleached goods give much better results in the dye bath."

CHENEY BROTHERS,
South Manchester, Conn.

April 15, 1919.

**We would be pleased to send full particulars on request**

ELECTRO BLEACHING GAS CO.

Pioneers and Leading Manufacturers of Liquid Chlorine

MAIN OFFICE: 18 East 41st St., New York

PLANT: Niagara Falls, New York

BEHIND Butterworth Finishing Machinery is the reputation acquired by a century of earnest endeavor and of steadfast purpose to build the most efficient machines that could be made.

Since 1820 we have specialized in the manufacture of textile finishing machinery. Serving many of the largest and foremost mills.

Our large corps of experienced mill men and designing engineers, is always at your service, both in an advisory and a creative capacity.

*Our catalogue will be sent on request.*

H. W. BUTTERWORTH & SONS CO.

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PHILADELPHIA

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W. J. Westaway Company
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*THE BUTTERWORTH LINE INCLUDES*

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| BLEACHING MACHINES | HYDRAULIC PRESSES | MANGLES (All Kinds) |
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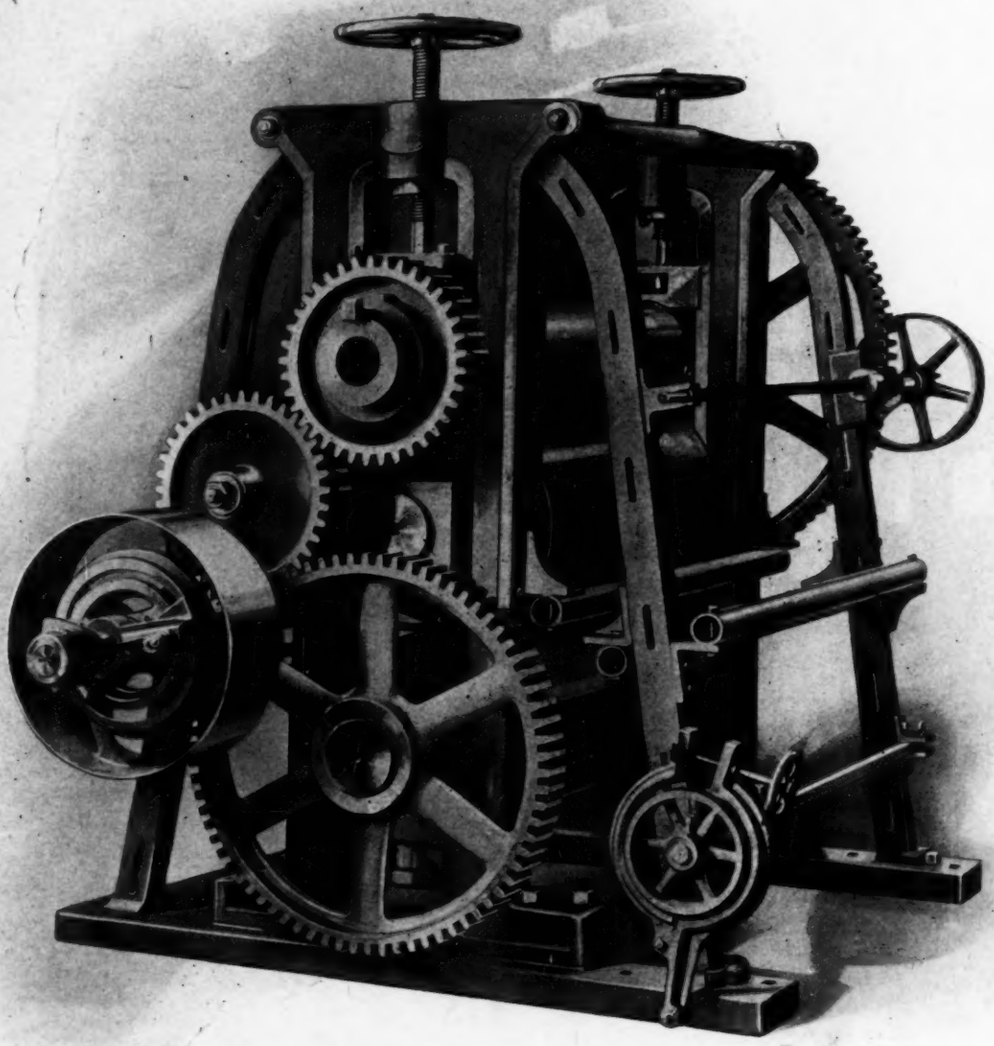
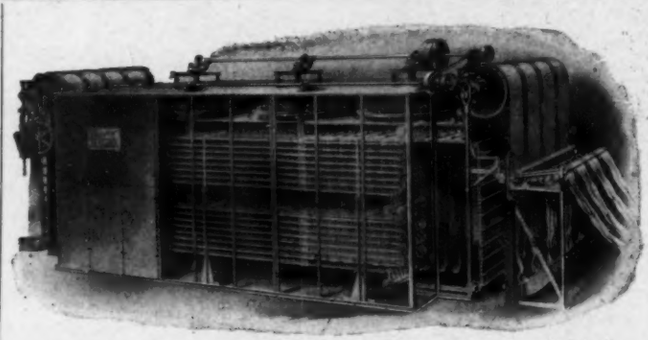
FINISHING Butterworth MACHINERY



Calender (Friction)

FINISHING
Butterworth
MACHINERY



"Proctor" automatic loop dryer, turns out cotton or woolen knit goods in the string, towels, etc., with that desirable soft "feel." Also built with wetting tank for use in shrinking cotton and woolen cloth.

# YOUR DRYING PROBLEMS

OUR Research Department is equipped and available to investigate the drying of your products, and also to plan an equipment in which your drying may be performed, economically, quickly and absolutely under control, in brief, satisfactorily.

You may obtain this service without incurring any expense or obligation.

***Let Us Know Your Requirements***

"Proctor" DRYERS for EVERY DRYING NEED

## Philadelphia Textile Machinery Co.

*Drying Machine Specialists*

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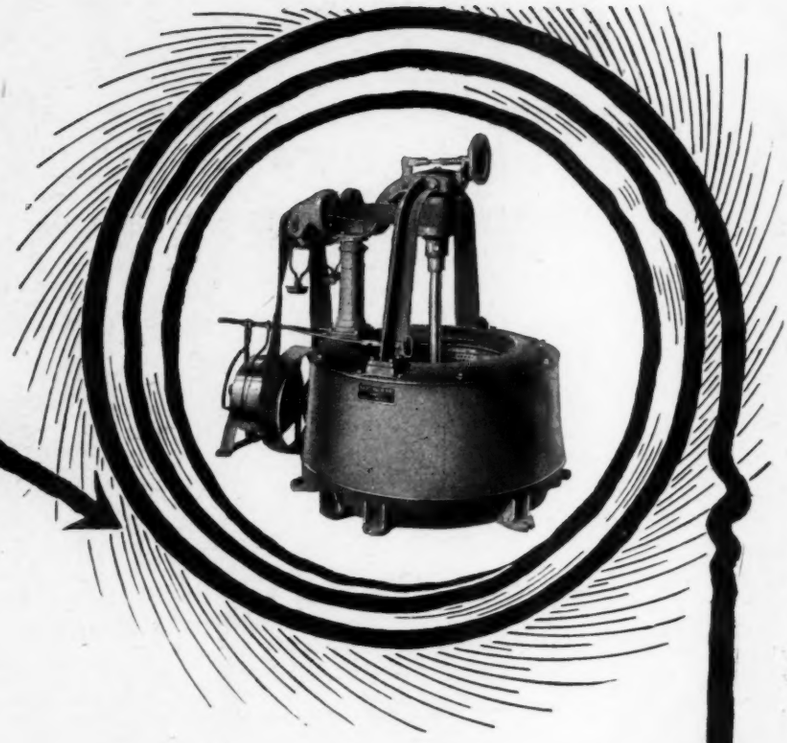
63

# The Name and The Machine



**For 66 Years**

# "TOLHURST"

has represented something more than a name. It has stood for supreme superiority in hydro-extractors.

Wherever hydro-extraction is practiced you will find

**TOLHURST WHIZZERS**

**are universally used**

Built for motor, engine or countershaft drive, from below or above—center-slung with open top or self-balancing—they are adaptable for all purposes and conditions relating to general textile work—dyeing, bleaching and finishing.

## TOLHURST MACHINE WORKS

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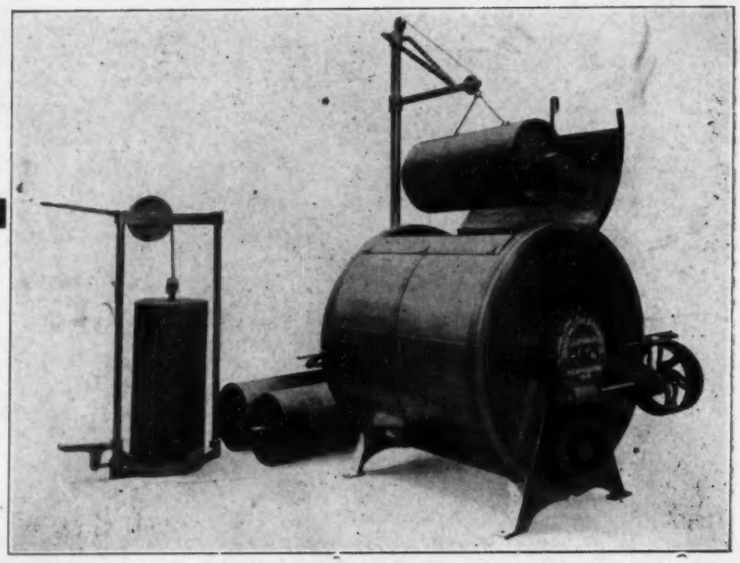
Montreal.

# COCKER HOSIERY DYEING MACHINE



THIS machine has been thoroughly tested out with all colors and under all conditions, and is guaranteed to give the very best results possible in the dyeing of hosiery.

The stock is carried in four perforated metal containers equipped with one removable head on each container, and the containers mounted on Spiders in such a manner as to permit of their being loaded and unloaded quickly from the machine.

The Spiders carrying these containers is revolved in the vat *in one direction.*

Machines are furnished with either belt or motor drive.

POINTS OF ADVANTAGE IN THIS MACHINE THAT MUST BE CONSIDERED.

1st—Matting and chafing of the stock is entirely eliminated.

2nd—Percentage of re-dyes is reduced to a minimum.

3rd—Different sizes and descriptions can be handled in one dyeing without confusion.

4th—Time required for loading and unloading machine reduced to a minimum.

5th—Absolutely level dyeings on all colors.

6th—Minimum of power required for operation.

For further particulars and prices, write or wire,

**Cocker Machine & Foundry Company,**

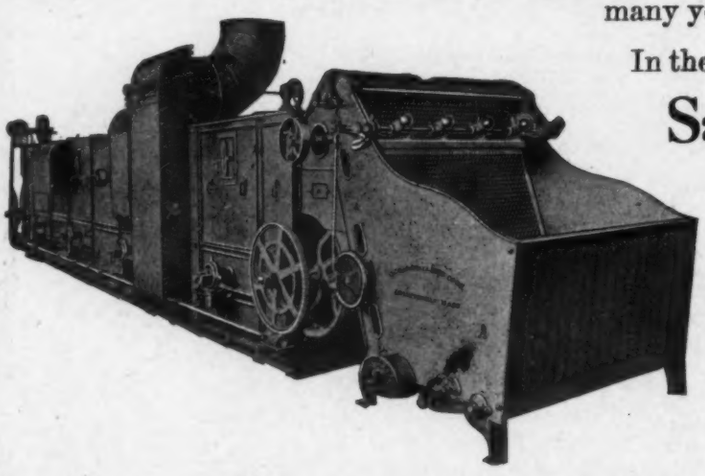
**Gastonia, N. C.**

**Builders of Textile Machinery.**

**Warpers—Beamers—Balling Attachments—Warp Dyeing Machinery—Reels.**

SARGENT DRYERS mark progress in Dryer Development comparable to that made in other fields of mechanical endeavor.

They are favored with a natural preference because they are designed on basic principles of air circulation, conveying, and general drying apparatus construction, which have had the approval of discriminating mill men and drying engineers for many years.



In the

## Sargent Dryer

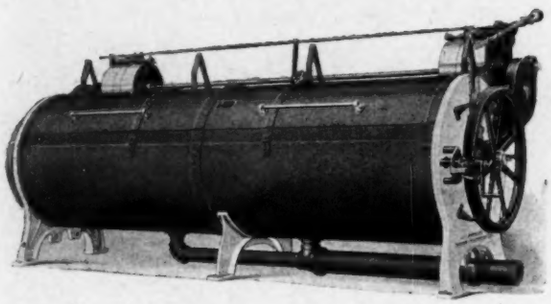
these principles have been combined and refined, making a complete machine which is unexcelled.

For drying cotton, linters, wool, hair, flax and other classes of raw material.

**C. G. SARGENT SONS Corp.,** GRANITEVILLE MASS.

*FRED H. WHITE, Southern Agent, Charlotte, N. C.*

# Machinery for the Textile Industry

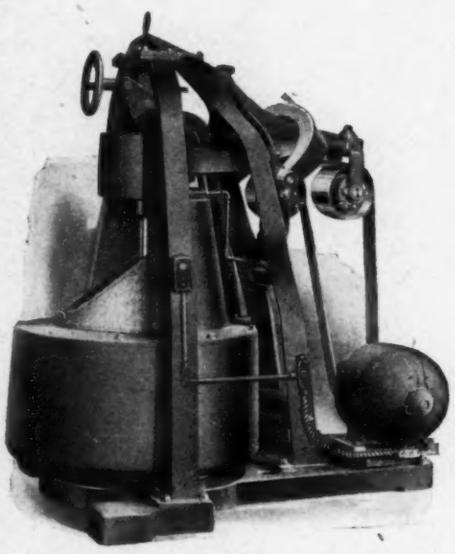


American Rotary Machine

## American Rotary Machines
### *For Fulling, Scouring, Bleaching and Dyeing*

American Rotary Machines are made of high grade material by expert workmen.

There are a number of styles of these machines for Fulling, Scouring, Bleaching and Dyeing, ranging in size from 36-inches to 150-inches in length—built of wood or metal with either belt or motor drive.



American Overdriven Extractor

## Centrifugal Extractors

The American Overdriven Extractor is built for heavy service. Vibration is minimized and its special construction insures an exceptionally smooth and light running machine, positive and true at all times.

The Overdriven Extractor may be had in three sizes with baskets 32, 40 and 48 inches in diameter. Also Underdriven Extractors, sizes 20 to 30 inches in diameter. Driven by either belt or motor.

### *We also manufacture*

**Knit Goods Calenders**
**Rotary Hosiery Presses**
**Automatic Underwear Presses**
**Underwear Finishing Presses**
**Mill Village Laundry Machinery**
**Wiper and Waste Reclaiming Plants**

### *Send for our catalog*

American Textile Machinery is manufactured with the requirements of the Textile industry always in mind. In mills where installations have been made it is giving unusual satisfaction.
Detailed information of any one or all of these machines will be sent you on request.

## The American Laundry Machinery Co.

***Specialty Department, Division "C"*** **Cincinnati, Ohio**

ZAVON
Kier-Boiling
The special function of ZAVON in the Kier is to speedily and thoroughly dissolve the cotton wax and maintain it constantly in solution during the afterwashing of the goods. It has a specific solvent action on the wax which is remarkable and which is attained by no other material in practical use. It not only detaches the wax but freely dissolves it and prevents its re-deposit on the Kier charge. This has been demonstrated repeatedly by the better and more even bleach obtained in the subsequent treatment of the goods. A good white is obtained with considerable less chemic, and more level dyeing is rendered possible if ZAVON has been used in the Kier. The charge of caustic can also be reduced in the presence of ZAVON and the goods are much more speedily washed free of all chemicals. As an assistant in Kier-boiling it has time and again, in the largest mills of the country, demonstrated its efficiency in preventing the formation of Kier-stains, which are a fruitful source of loss in time, labor and consequent loss in money.
ZAVON INC.

# THE TEXTILE SOLVENT

***Open Kettle Boil*** The advantages of ZAVON are here quite as conspicuous as in the Kier. The marked economies are due to the high solvent and emulsifying power of the product. Oil-stains—the bane of the hosiery and knit-goods trade—cease to exist and open kettle practice is rendered as good as Kier boiling.

***Softening*** In all the processes demanding a preparation of the cotton fibre from such after treatment, as mercerizing, dyeing, desizing, the use of Zavon is specially to be commended. It has virtures possessed by neither soap, nor soluble oil, and relies not only on an emulsifying or general detergent action on the waxes and oil-bound dirt but is possessed of a true solubilizing power.

The above claims are based on actual results in our customers' mills and we stand ready to convince you, as we have convinced them, that all our claims can be substantiated.

There can be no charge for time or material or our best efforts unless we can prove results to you. Can anything be fairer?

ZAVON TRADE MARK

## 413 Baltic St. Brooklyn, N.Y.

# Starch

To the members of the World Cotton Conference who are engaged or interested in textile manufacture, the Corn Products Refining Company extends its facilities pertaining to starches and dextrines, especially their use in the textile industry.

The wide range of products offered are well known to the domestic trade. Their recognized standards are based upon the long experience of satisfied customers.

We desire to give our guests from "overseas" every opportunity to assure themselves that our reputation at home is fully justified.

Our specialized organization and extensive resources enable us to offer

RELIABLE PRODUCTS
DEPENDABLE SERVICES
INTELLIGENT TECHNICAL ASSISTANCE

*Corn Products Refining Co.*

*17 Battery Place*
*New York*

Starch

# *The Grasselli Chemical Company*

## *"Dyestuff Department"*

**Works at Grasselli, N. J.**

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*SULPHUR COLORS: Black, Blue, Brown, Green*

*Direct Cotton Colors, Acid and Chrome Colors*

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*Bichromate of Soda* *Sodium Sulphide*

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**Toronto** **Hamilton** **Montreal**

*STOCKS CARRIED AT ALL PRINCIPAL POINTS*

# "BRETON"
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*For Plush and Velvet Finishing*

**BORNE, SCRYMSER COMPANY**

**80 South Street, NEW YORK**

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**Works: Elizabethport, N. J.**

# VICTOR MILL STARCH

## The Weaver's Friend

It boils thin—it penetrates the warps—increases breaking strength and carries the weight into the cloth. Being thoroughly washed free of gluten and other foreign matter it gives a bleach and finish to the goods that you can get from no other starch.

A trial order will convince you that VICTOR STARCH has no equal on the market.

**THE KEEVER STARCH COMPANY, Columbus, Ohio**

**Southern Agent: MR. JAMES H. MAXWELL, Greenville, S. C.**

**If you are not already using VICTOR STARCH call on our representative for a demonstration at your convenience**

# Warren Soaps

Warren's Soaps have gained pre-eminence thro' years of severe and actual test. War conditions have wrought no changes in the formulae of our Textile Soaps.

**The Warren Soap Mfg. Co.**

77 Summer Street, - - Boston, Mass.

HYDROXY
TRADE MARK — REGISTERED

# KIER OIL

A **Solvent** for the **Oils** and **Greases** on **Cotton** and the Mineral Oils which get on the cotton from the machines.

Used in the Boil before Bleaching or Dyeing.

Produces an even **Bleach** or **Dye.**

## HYDROXY "DEVELOPENE"

for finishing Dyed Hosiery, Fabrics, Yarns, etc.

Develops the Black—makes a lustrous Black out of a poor one.

Sample sent on request.

## Kali Mfg. Co.

**Chemists.**
**Philadelphia**

1404-1410 N. Front St. 1409-13 N. Hope St.

*ONE Operation!*
*—instead of SIX*
*THREE Hours Time!*
*—instead of 15 HOURS!*

**THE AUTOGYP PROCESS OF DYEING ELIMINATES BLEACHING ENTIRELY**

—Saves 3½% Shrinkage
—Saves 25% Tensile Strength
—Saves 50% of Steam
—Saves 30% of Labor
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—Saves all chemicals used in Chloride of Lime method.

**WE STAND READY TO PROVE THIS**
and have proved it many times already for manufacturers of mock Egyptian and other light shades of underwear, gloves and hosiery.

**WITH YOUR OWN MATERIAL**
Under Your Own Conditions
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In Your Own Mill

**AT OUR OWN EXPENSE**
*Write us for full information and addresses of satisfied users*

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## AN IMPORTANT MESSAGE

*To Turkey Red Oil Users*

Wherever SONNEPHOL is used a saving of 50% is effected as compared with the cost of TURKEY RED OIL.

SONNEPHOL is a concentrated textile oil—a dependable *softener*—Fibre Strengthener and an Intensifier.

**We back it with a positive Guarantee as to Price and Performance.**

Here is how some of the leading mills are using SONNEPHOL and with success.

(*1*) *In the Dye Bath.*
(*2*) *As a Fibre Lubricant.*
(*3*) *With Print Paste.*
(*4*) *In Finishing.*

Write for trial barrel and formula.

**L. SONNEBORN SONS, Inc.**
**Textile Products Division.**
**262 PEARL STREET NEW YORK CITY**
SONNEPHOL bears the "AMALIE" trade mark.

# Fast Vat Dyes

made by

**THE SOCIETY OF CHEMICAL INDUSTRY---IN BASLE, SWITZERLAND**

***SOLD IN AMERICA***

during the whole period of the war by

**A. KLIPSTEIN & COMPANY, New York**

and obtainable now in rapidly increasing quantities.

***These Dyes are Faster than Indigo***

They are sold under the trade name of

**"CIBA" and "CIBANONE" DYES**

and include every necessary shade of color. For example—
"CIBA" Blue, Violet, Yellow, Red, Scarlet and Bordeaux
"CIBANON" Green, Yellow, Orange.

The Textile Trade of America
need not suffer for the lack of

**FAST VAT DYES**

***Quotations and samples on application.***

**A. KLIPSTEIN & COMPANY**

**644 Greenwich St.** **New York City**

## *Jettison your Worries*

*Established 1870* *Incorporated 1890*

**Get the Soap Question off your mind**

*Tell us*

What kind you want—
How much—and
When.

*We will deliver*

The kind you want—
The quantity you want—
At the time you specify.

**The Warren Soap Manufacturing Company**

***Warren Service Makes Good***

**77 Summer Street, Boston, Mass.**

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**115 Broadway**

**NEW YORK CITY**

**Dyestuffs Intermediates Chemicals**

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| Victoria Blue B. | Direct Black |
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| Turkey Red Oil | Soluble Grease |
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Flaxhorn—The Delicate Finish.

**Works and Office: ATLANTIC MASS.**

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DU PONT DYESTUFFS

A SELF-CONTAINED American dyestuff industry means, first of all, ***protection*** to America and American industries.

***Protection*** to the nation in time of war in that it furnishes the plants, the technique and the intermediate products for the manufacture of high explosives and poisonous gases.

***Protection*** to our one source of supply for the synthetic medicinals that are the chief reliance of medical science in relieving pain and in fighting disease.

***Protection*** to the textile, leather, paper, printing ink, paint and other dyestuff consuming industries producing over two and a half billion dollars of manufactured goods a year, employing over one million people and representing upwards of two and one-half billion dollars in invested capital.

***Protection*** to industries indirectly dependent on an uninterrupted supply of dyestuffs for their maintenance producing over three billion dollars of manufactured goods a year, employing over a million people and representing nearly two billion dollars in invested capital.

In developing and safeguarding, with every means at our disposal, a self-contained American dyestuff industry, American manufacturers are therefore laying and preserving the very keystone of our national and industrial independence.

E. I. du Pont de Nemours & Co.
*Dyestuffs Sales Dept.*
Wilmington ∴ Delaware

Branch Offices
*New York* *Boston* *Providence*
*Philadelphia* *Chicago*
*Charlotte, N. C.*

DU PONT

## *Jettison your Worries*

*Established 1870* *Incorporated 1890*

**Get the Soap Question off your mind**

*Tell us*

What kind you want—
How much—and
When.

*We will deliver*

The kind you want—
The quantity you want—
At the time you specify.

## The Warren Soap Manufacturing Company

***Warren Service Makes Good***

**77 Summer Street, Boston, Mass.**

## Frank Hemingway, Inc.

**115 Broadway**

**NEW YORK CITY**

**Dyestuffs Intermediates Chemicals**

| | |
|---|---|
| Victoria Blue B. | Direct Black |
| Crystal Violet Conc | Direct Blue 2B |
| Sulphur Blue | Direct Navy Blue |
| Sulphur Black | Direct Sky Blue |
| Benzo Purpurine | Direct Fast Yellow |
| Congo Red | Chrysamine |
| | Chrysophenine |

Factory . . . . . Bound Brook, N. J.
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## BOSSON & LANE

**Manufacturers and Importers**

**Castor Oil and Castor Oil Products**

| | |
|---|---|
| Turkey Red Oil | Soluble Grease |
| Alizarine Assistant | Soluble Wax |
| Castor Soap Oil | Soluble Rosin |
| Bleaching Oil | Olo Soffene |
| Monoline Oil | Snoflake Softener |
| Victroline | T. R. Soap |
| Soluble Oil | Oleine |

Flaxhorn—The Delicate Finish.

**Works and Office: ATLANTIC MASS.**

# DU PONT AMERICAN INDUSTRIES

DU PONT DYESTUFFS

A SELF-CONTAINED American dyestuff industry means, first of all, ***protection*** to America and American industries.

***Protection*** to the nation in time of war in that it furnishes the plants, the technique and the intermediate products for the manufacture of high explosives and poisonous gases.

***Protection*** to our one source of supply for the synthetic medicinals that are the chief reliance of medical science in relieving pain and in fighting disease.

***Protection*** to the textile, leather, paper, printing ink, paint and other dyestuff consuming industries producing over two and a half billion dollars of manufactured goods a year, employing over one million people and representing upwards of two and one-half billion dollars in invested capital.

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*Philadelphia* *Chicago*
*Charlotte, N. C.*

DU PONT

# Atlantic Blacks

Our list of Sulphur Blacks now includes:

**ATLANTIC BLACK B EXTRA**, a Jet Black of unequalled shade and intensity, especially suited for dyeing hosiery, skeins and warps. This mark has comprised our chief production to date.

**ATLANTIC BLACK G EXTRA**, a Greenish Black, particularly suited for warps in union fabrics to be crossdyed.

**ATLANTIC BLACK R EXTRA**, a Reddish Black, recommended for dyeing raw stock, where covering power, and not shade, is the chief consideration.

All the above Blacks possess the unrivaled "ATLANTIC QUALITY."

**Atlantic Dyestuff Company**

WORKS: BURRAGE, MASS.

SALES OFFICES:

PHILADELPHIA 1530 Real Est. Trust Bldg. | BOSTON 88 Ames Bldg. | NEW YORK 230 West 13th St.

CHARLOTTE 706 Com. Nat. Bank Bldg. | PROVIDENCE 334 Westminster St.

CHICAGO 227 W. Randolph St.

# MONOPOLE OIL

Reg. Trade-Mark 70991.

**Special Sizing and Finishing Products for Cotton, Wool and Silk.**

Cream Softener

Soluble Oils

Bleaching Oil

Sulphur Black

Levuline

Glasgow Sizing

Hydrosulphites for All Purposes.

**JACQUES WOLF & CO.**

Manufacturing Chemists and Importers.

Main Office and Works, PASSAIC, NEW JERSEY

New York Office: 100 William Street.

Western Representatives, United Indigo & Chemical Co., Ltd., 218 West Kinzie St., Chicago, Ill.

# THESE

are only two of the hundreds of items of interest to you in our general catalog No. 110.

*Send for It!*

## No Matter

what your requirements — we have them in our very complete stock of supplies and equipment for all forms of industrial activity.

*Send them in!*

**Geo.B.Carpenter&Co.**

Dept. 30 440 N. WELLS ST.

Chicago, - Illinois

# ADVERTISING

conserves the buyer's time by acquainting him with a product at his leisure, long before the buying need arises.

# New Orleans

## Louisiana

*"The Crescent City"*

---

Information cheerfully furnished by the New Orleans Association of Commerce.

# IN JANUARY 1917

The New Orleans Association of Commerce had a membership of 1420.

# IN JULY 1919

The New Orleans Association of Commerce had a membership of 4341.

The difference between 1917 and 1919 is accounted for in one word SERVICE.

The New Orleans Association is the South's GREATEST CIVIC ORGANIZATION because it has convinced its membership that SUCCESS is only possible where UNITED EFFORT is thrown behind every project for city betterment.

To secure this UNITED EFFORT the INTEREST of every member in the Association's affairs and management is ESSENTIAL.

No membership in any association can be retained for any time where the member does not UNDERSTAND AND FEEL INTERESTED AT ALL TIMES IN WHAT THE ASSOCIATION IS DOING.

It was this understanding and interest that gave the New Orleans Association of Commerce its UNITED FORCE behind its activity.

It was this force that made possible the CONSTRUCTION of the INDUSTRIAL CANAL.

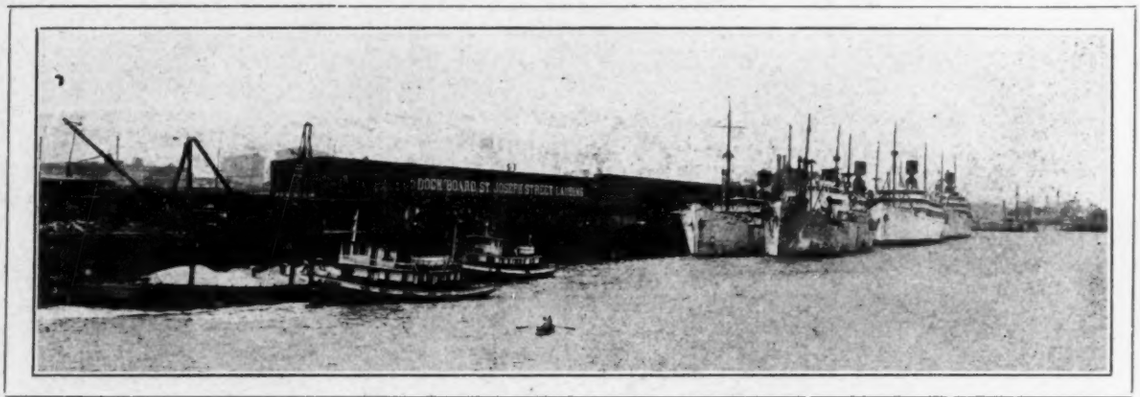
It was this force that made it possible for this Association to make arrangements to have the entire business district **subsurfaced** and REPAVED IN RECORD TIME.

Interest of every member in the Association is what created this force.

MAKE EVERY MAN FEEL THAT HIS MEMBERSHIP COUNTS AND YOU WILL KEEP HIM AND BRING IN ANOTHER.

## New Orleans Association of Commerce

NEW ORLEANS, LA.




*ONE OF THE MANY STEEL SHEDS LINING THE NEW ORLEANS HARBOR FRONT*

We invite the attention of the

# WORLD COTTON CONFERENCE

*AND*

# COTTON MEN THE WORLD OVER

to the

## *Special Facilities and Advantages That Have Made* NEW ORLEANS

## THE SECOND AMERICAN PORT

***In volume of export and import tonnage***

***And which will enable it to maintain that position***

These facilities were not bestowed by Nature upon New Orleans.

New Orleans was not content to merely occupy its strategic position as the gateway to the great Mississippi Valley—its outport to the world—it was not satisfied with the advantages that Nature had so bountifully provided—but twenty-three years ago it inaugurated a policy and plan of public ownership and operation of port facilities that have not only enabled it to keep pace with other American ports, but to outstrip many of them in the competition for world trade.

This was not a haphazard development, but a gradual process or evolution that has been a demonstrated practical success. In the words of Roy S. MacElwee, Ph.D., Lecturer in Economics and Foreign Trade at Columbia University, in his book on "Port and Terminal Facilities"—

**"New Orleans is the most advanced port in America in respect to scientific policy."**

**The New Orleans harbor extends from the jetties at the mouth of the Mississippi River to the city of Baton Rouge—237 miles in length, averaging three-quarters of a mile wide, and from 36 to 234 feet deep.**

**There are 41 miles of river frontage under jurisdiction of the Board of Commissioners of the Port of New Orleans, the members of which are appointed by the Governor of Louisiana and serve without remuneration; and since it took charge 17 years ago this Board has expended nearly $15,000,000 in improving over seven miles of the east bank with wharves, steel sheds and modern elevators, and other facilities for loading and unloading.**

**Including equipment built by railroads and industrial plants on both sides of the river, the total improved portion of the port is 45,000 lineal feet, capable of berthing 90 vessels 500 feet long. Depth in this part of the river varies from 40 to 100 feet at the wharf lines to 188 feet in midstream. No slips are needed, as the vessels can berth alongside, and the present wharf area, 86½ acres, gives ample room for all present needs.**

**These wharves are served by the Public Belt Railroad, with 60 miles of track municipally owned and operated, and by two other terminal belt railroads, the New Orleans Terminal with 80 miles of track on the east bank, and the Trans-Mississippi Terminal Company with 69.65 miles on the west bank; and by 6 miles of the Louisiana Southern Railway, giving a total trackage of over 215 miles connecting the wharves with the ten trunk line railroads which enter the city, and also with industrial plants, private compresses by means of side-tracks. The total trackage serving the port could store 13,000 cars of exports, at one time.**

**This is the most perfect co-ordination of rail and water facilities of any American port; and the result has been a net gain of 60 per cent in the foreign trade of New Orleans for the first seven months of 1919 over the same period of 1918.**

For further information relating to port charges and other details, addresses the

## BOARD OF COMMISSIONERS

*PORT OF NEW ORLEANS*

*An Agency of the State of Louisiana*

*W. B. THOMPSON, President*

*(Other special advantages and facilities are featured on succeeding pages of this issue*

*BIRD'S-EYE VIEW OF THE COTTON WAREHOUSE AND TERMINAL PLANT AT NEW ORLEANS*

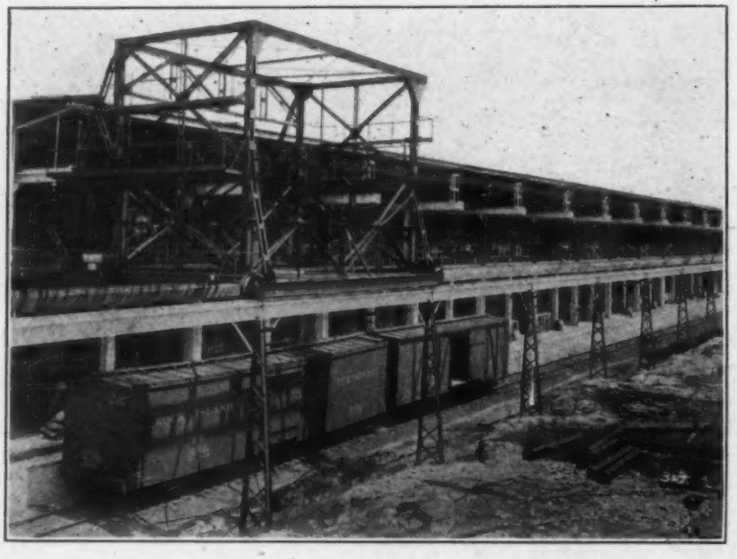
# The WORLD'S LARGEST COTTON WAREHOUSE

## AND TERMINAL PLANT

### Owned and operated by the STATE OF LOUISIANA

New Orleans particularly invites the inspection by delegates to the World Cotton Conference of her publicly-owned and operated warehouse and co-ordinated terminal for the storage and handling of cotton.

It is estimated that the storer saves at least one dollar on every bale stored in this great plant; but this saving is only a small part of the advantage gained and to be gained.



*COTTON MAY BE LOADED OR UNLOADED FROM CAR-SIDE OR SHIP-SIDE*

**Mechanical advantages of the public cotton warehouses:**

**1.—Fireproof construction. Walls of solid re-inforced concrete and steel, with rolling steel doors at all openings.**

**2.—Distribution and separation of units.**

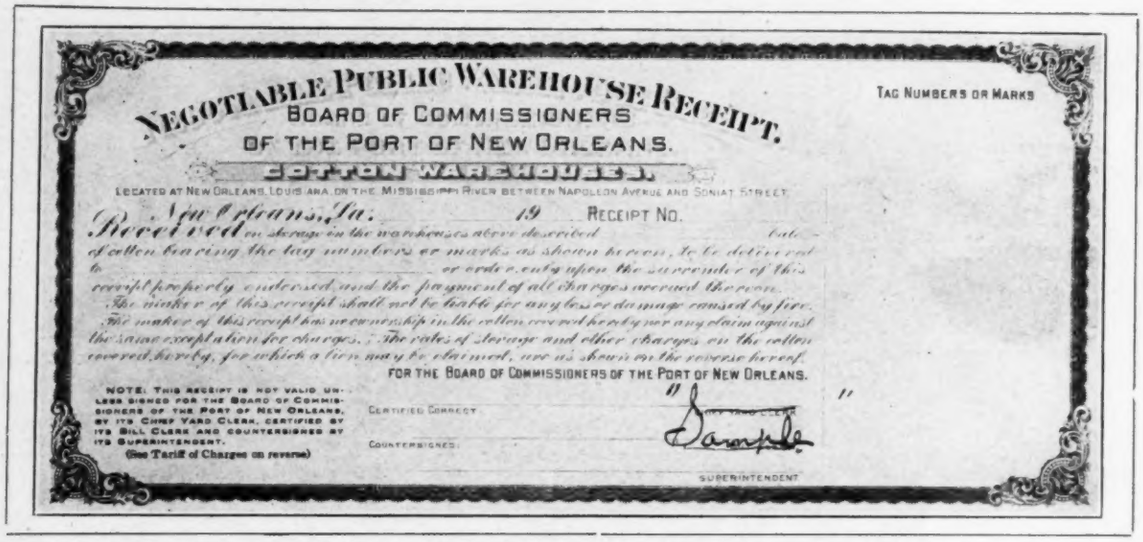
**3.—Automatic sprinkler protection throughout.**

**4.—Hydrant and monitor protection.**

**5.—Three sources of water supply.**

**6.—Day and night patrolmen service.**

**7—Ample distribution of chemical extinguishers, water barrels and buckets.**



NEGOTIABLE PUBLIC WAREHOUSE RECEIPT.
BOARD OF COMMISSIONERS
OF THE PORT OF NEW ORLEANS.
COTTON WAREHOUSES.
LOCATED AT NEW ORLEANS, LOUISIANA, ON THE MISSISSIPPI RIVER BETWEEN NAPOLEON AVENUE AND SONIAT STREET.

TAG NUMBERS OR MARKS

New Orleans, La. 19 . RECEIPT NO.

Received in storage in the warehouses above described bale[s] of cotton bearing the tag numbers or marks as shown hereon, to be delivered to or order, only upon the surrender of this receipt properly endorsed, and the payment of all charges accrued thereon.

The number of this receipt shall not be liable for any loss or damage caused by fire.

The number of this receipt has no ownership in the cotton covered hereby nor any claim against the same except for charges. The rates of storage and other charges on the cotton covered hereby, for which a lien may be claimed, are as shown on the reverse hereof.

FOR THE BOARD OF COMMISSIONERS OF THE PORT OF NEW ORLEANS.

NOTE: THIS RECEIPT IS NOT VALID UNLESS SIGNED FOR THE BOARD OF COMMISSIONERS OF THE PORT OF NEW ORLEANS, BY ITS CHIEF YARD CLERK, CERTIFIED BY ITS BILL CLERK AND COUNTERSIGNED BY ITS SUPERINTENDENT.
(See Tariff of Charges on reverse)

CERTIFIED CORRECT

COUNTERSIGNED

SUPERINTENDENT

*THE NEGOTIABLE RECEIPT, AN ATTRACTIVE FEATURE OF THE WAREHOUSE*

# The WORLD'S LARGEST PLANT FOR STORAGE

## OF AN AGRICULTURAL COMMODITY
## UNDER DIRECTION OF THE BOARD OF COMMISSIONERS
### PORT OF NEW ORLEANS
### W. B. THOMPSON, President.

Inspection and certification, showing grade, character, staple, class and weight, by a highly competent, authoritative and responsible inspection bureau, operated by the New Orleans Cotton Exchange, is a factor of great importance, since it enables owners of cotton to obtain very low cost money for the financing of cotton.

These facilities are being enlarged to bring the annual handling capacity well above 2,000,000 bales. New Orleans expects to ultimately increase its annual cotton business to 5,000,000 or 6,000,000 bales, and to greatly increase its prestige as the premier cotton market.

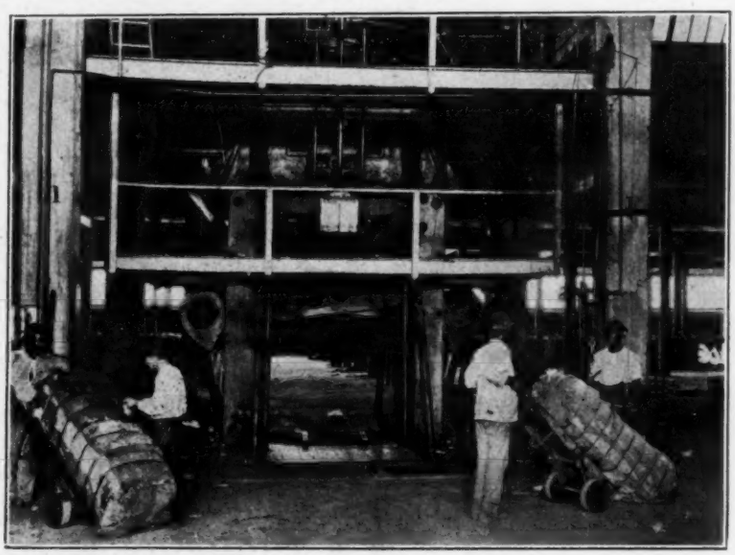
New Orleans is the line of low resistance for a region producing more than 6,000,000 bales of cotton annually; and these modern facilities are so strategically located as to bring within the reach of cotton owners, merchants, handlers and exporters all the advantages of a completely equipped market of deposit, surplus supply market and market of resale.

**Scientific co-ordination of river, rail, ocean and storage reduces costs of handling to a minimum and increases the dispatch of unloading and loading to a maximum.**

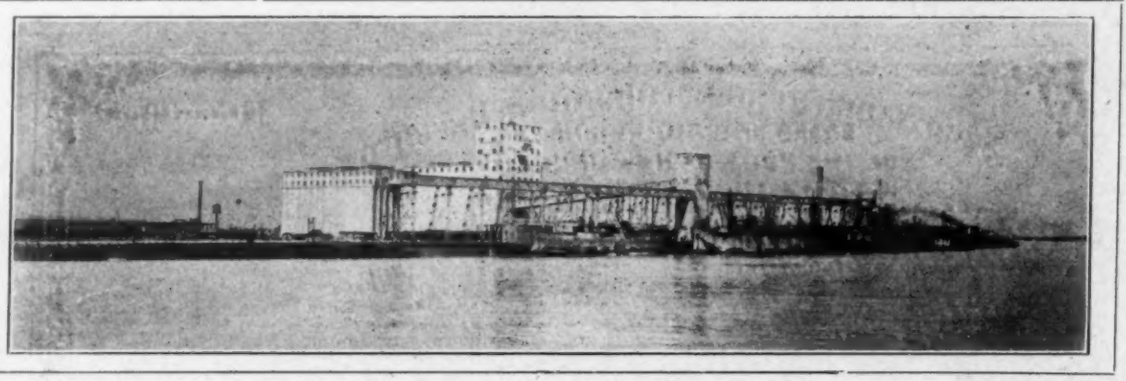
**Three modern high-density compresses make it possible to reduce cotton to a density of 33 pounds to the cubic foot, securing a 20 per cent reduction in freight rates.**

**A simple bale-pulling device enables the warehouse to enjoy both the efficiency of the simple bale and the economy of piled storage.**

**Cotton stored in these warehouses at the rate of 30 cents per $100 per annum, insurance to be effected by storer. Negotiable receipts of the warehouse are current in all financial centers.**



*HIGH-DENSITY COMPRESS, NEW ORLEANS PUBLIC COTTON WAREHOUSE*



*VIEW FROM RIVER OF THE PUBLIC GRAIN ELEVATOR, NEW ORLEANS, SHOWING MARINE LEGS FOR LOADING AT SHIPSIDE.*

# PUBLIC GRAIN ELEVATOR IS A FEATURE OF THIS COMPREHENSIVE PORT DEVELOPMENT

With the gradual development of port facilities and equipment at New Orleans, and the successful inauguration of the public cotton warehouse and terminal, it was realized that a public grain elevator should be embraced in the system, not only for the benefit of the grain trade and the agricultural interests, but for the benefit of the entire market, the movement of grain attracting ocean tonnage to the port and also being an important factor in the regulation of domestic freight rates.

**The public grain elevator, with its annex, has cost over three million dollars to date; but its record more than justifies the expenditure. It has the reputation of being the most modern and the cleanest grain elevator in the world. It is absolutely fireproof and explosion proof, and is equipped with an up-to-date dust collecting system. It is of reinforced concrete construction and carries an insurance rate on grain of 13 cents per hundred.**

The New Orleans market is served by eight grain elevators, seven being used in the export trade, with a total capacity of 7,022,000 bushels, of which 2,622,000 can be stored in the public grain elevator.

**The unloading capacity of the public grain elevator is 200,000 bushels per day from cars and 60,000 bushels per day from river barges or ships. The unloading capacity from barges and ships will be doubled just as soon as the business offered justifies. Loading to ships or river barges can be made at the rate of 100,000 bushels per hour—all to one or four vessels simultaneously.**

**Among the mechanical features of the public grain elevator may be mentioned the Zelaney System to protect grain on store; automatic sacking scales in elevator and on elevator wharf; the pneumatic conveyor system in unloading grain from river barges and ships. Electric power is used for the entire operation of the plant and each unit is operated independently.**

This description of the Public Grain Elevator illustrates the thoroughness and efficiency of the port equipment; but the Board has other plans which will make the shipping facilities of the port even more attractive. These include a commodity warehouse for the storage of miscellaneous products, and a coal storage handling plant to supplement the three coal tipples, floating coal elevators and fleet of coal barges now operated by private interests.

The volume of bunker coal handled in the harbor is now between 600,000 and 700,000 tons annually; and the new plant planned by the Board will have a minimum storage capacity of 25,000 tons, and equipped to receive coal for storage from both cars and barges. The wharf will be of such a length as to take care of three ships at one time, with a minimum loading capacity of approximately 300 to 500 tons per hour.

# BOARD OF COMMISSIONERS

*PORT OF NEW ORLEANS*

*An Agency of the State of Louisiana*

*W. B. THOMPSON, President*

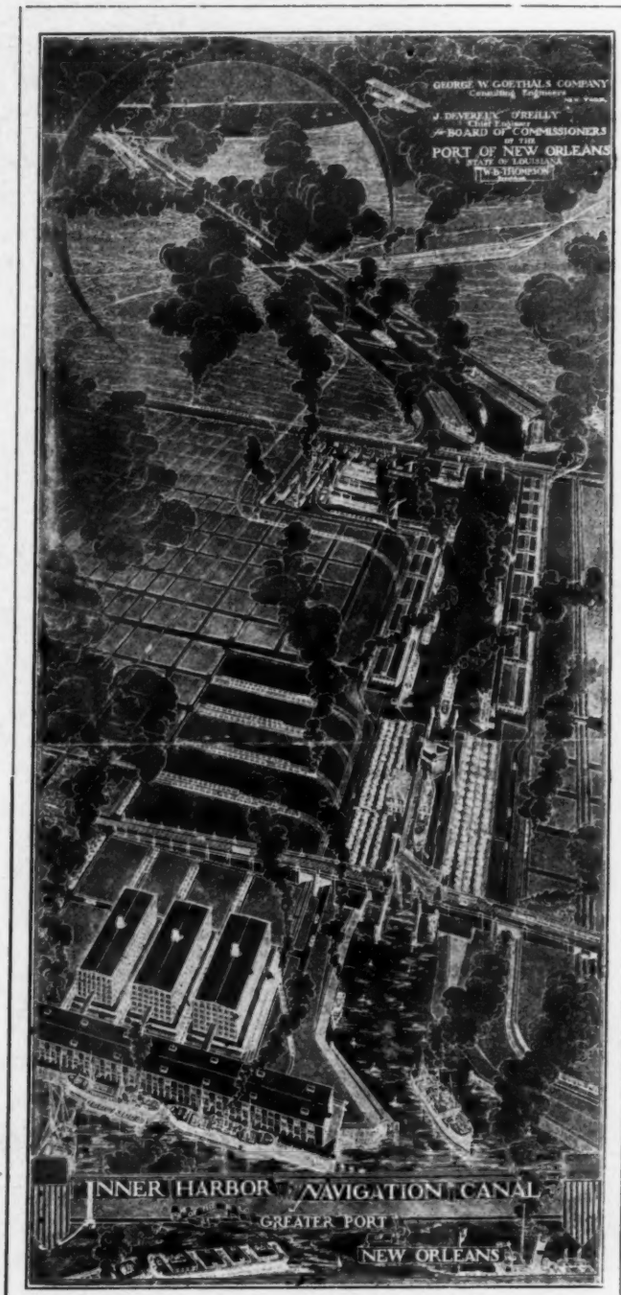
# THE NEW ORLEANS INNER HARBOR

The attention of cotton spinners and spinning interests is particularly directed to the advantages offered for the establishment of manufacturing enterprises on the New Orleans Harbor, an industrial canal and ship basin, which is now well on its way to completion and will rank with the half dozen greatest world canals, with a depth of water equalled only by those of Panama, Suez and Kiel.

**This canal will provide miles of ideal factory sites, on a fixed navigable water level, and served on the land side by the New Orleans Public Belt Railway, directly connecting with all trunk lines entering the city; all this within the city limits of New Orleans, with trolley service to all parts of the city, and with all other public utilities immediately at hand. These miles of factory sites may be acquired on long-time leases by private enterprises—something that is impossible on the city's river front, for the reason that that frontage has been permanently reserved for public development of facilities that shall be open to all commodity handlers alike and without preference or favor.**

When the preeminence of New Orleans as a spot cotton market is considered, and also its ideal location for the assembling of raw material and distribution of the finished product, all of which factors have a favorable influence on rail and ocean freight rates, there are no potential factory sites in the world more attractive than those the Board of Commissioners is able to offer at this time. There is also the important factor of labor to be considered, and there is no better labor market in the South than New Orleans, which already manufactures more than any other two Southern cities combined.

Within the Inner Harbor there will be a turning basin, ample in size, to permit the free movement of the largest ships. There will be a direct outlet to the sea from the river via Lake Pontchartrain, reducing by approximately one-half the distance from port to Gulf. At the river end of the harbor will be a great lock, with a minimum depth of water of 30 feet over the sill, to facilitate the passage of ships at whatever stage the river may be and to maintain the fixed water level in the canal proper.




# BOARD OF COMMISSIONERS

*PORT OF NEW ORLEANS*

*An agency of the State of Louisiana*

*W. B THOMPSON, President*

# THE IDEAL SITE FOR COTTON MILLS

The United States Government thought so well of the New Orleans Inner Harbor as an assembling and distribution point for its stores from all sections of the country that it has constructed at the river entrance of the canal three enormous depot warehouses, six stories in height, and wi with a combined capacity of 178,500 tons of miscellaneous goods. Serving these are a wharf and warehouse nearly half a mile in length, the entire construction costing $15,000,000.

**The construction work on the new Inner Harbor is in the hands of the genius that made the Panama Canal a reality—the Goethals Engineering Company—under the general supervision of the Board of Commissioners and its chief engineer.**

**The length of the canal and its channel approaches will be 31,000 feet, or about six miles. Excavation of earth will amount to 10,000,000 cubic yards. 3½ million feet of lumber, board measure, will be required for concrete forms and other uses.**

**The locks are being built in 15-foot monoliths; 125,000 barrels of cement used. About 100,000 cubic yards of concrete are being placed in the work. Six thousand tons of reinforcing steel are being used for the concrete work, and 7,000 tons of other steel for such purposes as lock gates, bridges, etc. Each gate leaf will weigh 400,000 pounds—a total of 4,000,000 pounds of steel plate and girder construction.**

**This outline will give an idea of the stupendous character of this construction; and it is needless to say that it would not have been undertaken but for the fact that the Board of Commissioners was impressed with the many advantages and attractions of the canal as a potential site for new industries and port expansion.**

The South stands on the threshold of an agricultural and industrial development that is probably without precedent in the history of the world; and New Orleans has not been content to merely follow in the footsteps of others, but has blazed her own trail in the scientific development of her port and market facilities, so that she is indeed entitled to her prestige as the great Southern metropolis.

***The New Orleans Inner Harbor Offers the opportunity for men of brains aud vision to join their fortune to that of New Orleans, the City of New Opportunity***

# BOARD OF COMMISSIONERS

*PORT OF NEW ORLEANS*

*An Agency of the State of Louisiana*

*W. B. THOMPSON, President*

THE NECESSITY for comprehensive Public Belt Railroad service for the City and Port of New Orleans was manifest many years before the establishment of the service. There were many plans proposed, but none were carried to fruition, until the present plan was evolved in 1908.

Space will not permit recital in detail of the history of the effort to create a Publc Belt Railroad System.

Prior to the establishment of the present Public Belt Railroad System, portions of the river front were encumbered with tracks belonging to various railroads, whose competitive interests compelled delays and restrictions in the movement of traffic, and in many instances limited industries to the facilities of the railroad on whose track such industries were located. Public policy dictated that those railroads whose franchises were insufficient should be furnished terminal facilities, and likewise new railroads that should desire entrance to the City should be afforded terminal facilities upon a broad, permanent and well defined plan, without discrimination.

The present Public Belt Railroad System grew out of the Ordinance of the Council of the City of New Orleans, creating the Public Belt Railroad of the City of New Orleans, and providing for the construction, maintenance and operation of a Public Belt Railroad System.

The City of New Orleans appropriated the sum of $30,000 in 1905, which was expended towards preliminary survey, and further appropriated the sum of $100,000, payable $10,000 annually, out of the reserve fund portion of Budget Expenditures of the City of New Orleans, for the years 1906 to 1915.

Upon the induction into office of the first administration of Mayor Martin Behrman, the Public Belt Railroad Commission duly organized under the Ordinance referred to, the work of construction and development of the Public Belt Railroad System began.

To provide financial means to undertake the construction of the Public Belt Railroad System was one of the first problems that confronted the first Administration of Mayor Behrman, and upon his recommendation to the City Council an Ordinance was adopted capitalizing the appropriations for Belt Railroad purposes, made by the City of New Orleans, against its future revenues, and credit arrangement was made with several New Orleans banks whereby the appropriation of $100,000 above referred to, was made immediately available.

With this amount, a portion of the first main line track along the river front was laid, together with switch connections to some of the Public Whaves.

In 1907 further appropriation of $250,000 was made by the City for

*(Continued on next page.)*

Public Belt Railroad purposes, and the appropriation was capitalized in similar manner as the first appropriations, aggregating $100,000, and these monies were expended in the further development of track facilities, and the purchase of locomotive equipment.

In August, 1908, the operation of the Public Belt Railroad was undertaken, and the success of the Public Belt Railroad enterprise having been demonstrated from a financial as well as a practical standpoint, the General Assembly of the State of Louisiana for the year 1908 was appealed to, and an Act proposing an Amendment to the Constitution of the State of Louisiana, to provide for the issuance of $2,000,000 Public Belt Railroad Bonds was adopted. The Amendment to the Constitution was ratified by the electorate of the State by an overwhelming vote in November, 1908.

The Public Belt Railroad Commission has issued $800,000 of said bonds, and has recently sold, on August 20th, an additional issue of $600,000, making the aggregate amount of bonds issued under said Act, $1,400,000.

At present the trackage and operation of the Public Belt Railroad extend along the active water front and territory contiguous thereto. Its property at this time is as follows:

24.05 Miles of Main Line.

37.65 Miles of Switches, including connections with all public wharves and serving private industries and public delivery tracks.

61.70 Total Mileage.

13 Locomotives.

Roundhouse and Machine Shops.

The total cost of the Railroad to June 30th, 1919, was $1,751,598.13. This amount has been provided out of the general revenues of the City, the proceeds of the three issues of bonds, and by certain amounts which have been provided by sundry persons and firms for the construction of switch tracks serving their several plants and industries.

The Public Belt Railroad now serves exclusively the following plants and industries:

All Public wharves.

Public Cotton Warehouse, present capacity 260,000 bales; ultimate capacity 500,000 bales (Additional units now under construction).

Public Grain Elevator; capacity 2,622,000 bushels.

(All of said wharf and warehouse facilities are owned and operated by the Board of Commissioners of the Port of New Orleans, an agency of the State of Louisiana.)

10 Public delivery tracks.

72 Private industries.

*(Continued on next page.)*

New Orleans Army Supply Base; comprising three multiple story reinforced concrete warehouses, with approximately 1,605,000 square feet of floor space, and a wharf approximately 177 feet wide and 2000 feet long, with a two-story steel shed.

Portion of the Inner Harbor-Navigation Canal, now in course of construction.

The Public Belt Railroad has connection with all lines entering New Orleans.

Record of Cars Handled:

For the year ending Dec. 31st, 1909, 82,965 cars (loads and empties), were handled.

For the year ending Dec. 31st, 1918, the total cars handled (loads and empties), approximated 238,719 cars. Under normal conditions, the business of 1918 would undoubtedly have been greatly augmented.

The charge of switching is at present $5.00 per car flat, on interline traffic, denominated as competitive, having been advanced Nov. 1st, 1917, from $2.00 per car flat; the $2.00 rate still applies to interline traffic denominated as non-competitive, and for the switching of a car originating at a point and destined to a point within the switching limits of the City of New Orleans.

The Public Belt Railroad Commission is composed of sixteen citizen tax payers and the Mayor, who is President of the Commission.

The Public Belt Railroad now supplies comprehensive, economical and non-discriminatory switching service to all who require and can use same. It transfers cars from railroads to railroads; from railroads to wharves; from wharves to railroads; from railroads to industries and public delivery tracks; from industries to all transportation outlets of the City, and makes available to railroads that desire an entrance into the city, all of the said railroad, wharf and individual switch connections at a low charge.

The Public Belt Railroad receives cars from the several railroads at different points, and the cars are handled by the Public Belt Railroad with its own equipment to the several points of delivery.

The operation of any railroad over the tracks of the Public Belt Railroad is prohibited by the organic law of the Public Belt Railroad.

It is the policy of the Board of Commissioners of the Port of New Orleans, which has jurisdiction over the public wharves, that all public wharves and other facilities of the Port Commission shall be served exclusively by the Public Belt Railroad.

# New Orleans Public Belt Railroad

Municipal Building — New Orleans, La.

ESTABLISHED 1859

# W. B. Thompson & Co.

## Cotton Factors

COMMISSION MERCHANTS
and STAVE FACTORS

808 PERDIDO ST.
NEW ORLEANS

ATLANTA
GEORGIA

# Welcomes You to the World Cotton Conference

WE JOIN all of New Orleans—and the entire South—in extending to the Cotton Men of the World a sincere and cordial welcome to the Crescent City, on October 13, 14, 15 and 16.

May your visit to one of the chief cities of the South not only prove gloriously beneficial to every angle of the cotton industry, but may every moment of your stay be as pleasant and harmonious as we are confident it will prove interesting and profitable.

# *Beane Brothers*

*Cotton Merchants*

*New Orleans,*

*La.*

---

# *Fenner & Beane*

*Cotton Futures*

*New Orleans,*

*La.*

# M.C. SINS & CO. INC.

# EXPORT

## FREIGHT BROKERS

FORWARDING AGENTS
INSURANCE SPECIALISTS

EXPERIENCE | CABLE ADDRESS EXPORTSINS | EFFICIENCY

OUR service consists of more than the mere booking and forwarding of your shipments and preparing documents in connection therewith.

We will endeavor to keep all exporters fully informed as to the freight situation and other matters pertaining to Export shipments by issuing from time to time market letters, sailing schedules and specail service letters.

We specialize in real service, having an efficient organization to do so.

A trial will convince you.

RELIABILITY

References:
Commercial National Bank

SERVICE

## M.C. SINS & CO, INC.

EXPORT-FREIGHT-&-FORWARDING-AGTS

**INSURANCE SPECIALISTS**

COMMERCIAL-BANK BLDG. NEW ORLEANS, LA.

JNO. F. CLARK RUSSELL CLARK J. MARKS

# *JNO. F. CLARK & CO.*

## BROKERS

COTTON, STOCKS, BONDS, GRAIN,
PROVISION, COFFEE, SUGAR
AND COTTON SEED OIL

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N. O. Cotton Exchange
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NEW ORLEANS, LA.
818 GRAVIER STREET
PHONES: MAIN 1138-1139

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FALLS BLDG., 26 N. FRONT ST.
PHONES: MAIN 607, LONG DISTANCE 9924

New York Correspondents:
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LIVINGSTON & CO.
THOMSON & McKINNON

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THOMSON & McKINNON

PRIVATE WIRES TO

NEW YORK, CHICAGO AND PRINCIPAL POINTS
OF THE COTTON BELT

SILVAN NEWBURGER JOSEPH NEWBURGER H. M. RANKIN

# *SILVAN NEWBERGER & CO.*

## COTTON MERCHANTS AND EXPORTERS

## *Staples and Benders a Specialty*

839 GRAVIER STREET

## NEW ORLEANS

*BRANCH OFFICES*

CLARKSDALE, MISS.
GREENWOOD, MISS.
ITTA-BENA, MISS.
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YAZOO CITY, MISS.
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CALEXICO, CAL.
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LAUREL, MISS.
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LIVERPOOL, ENGLAND.

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LIVERPOOL COTTON BROKERS' ASS'N

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# MINOPRIO & COMPANY

## *Cotton Exporters*

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## Kenworthy, Minoprio & Co.

PARIS AND HOUSTON, TEXAS

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NEW YORK COTTON EXCHANGE
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MEMPHIS COTTON EXCHANGE
HOUSTON COTTON EXCHANGE
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**Cable Address: MINOPRIO**

ESTABLISHED 1865

# M. LEVY & SONS

COTTON

COMMISSION

MERCHANTS

830 & 832 GRAVIER STREET

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"WARRINER, NEW ORLEANS"
"ELDER, NEW ORLEANS"
"ELDER, MOBILE"

**CODES USED**
SCOTT'S TENTH EDITION
WATKINS 1884 EDITION

# M. & R. WARRINER

INCORPORATED

## STEAMSHIP AGENTS AND BROKERS

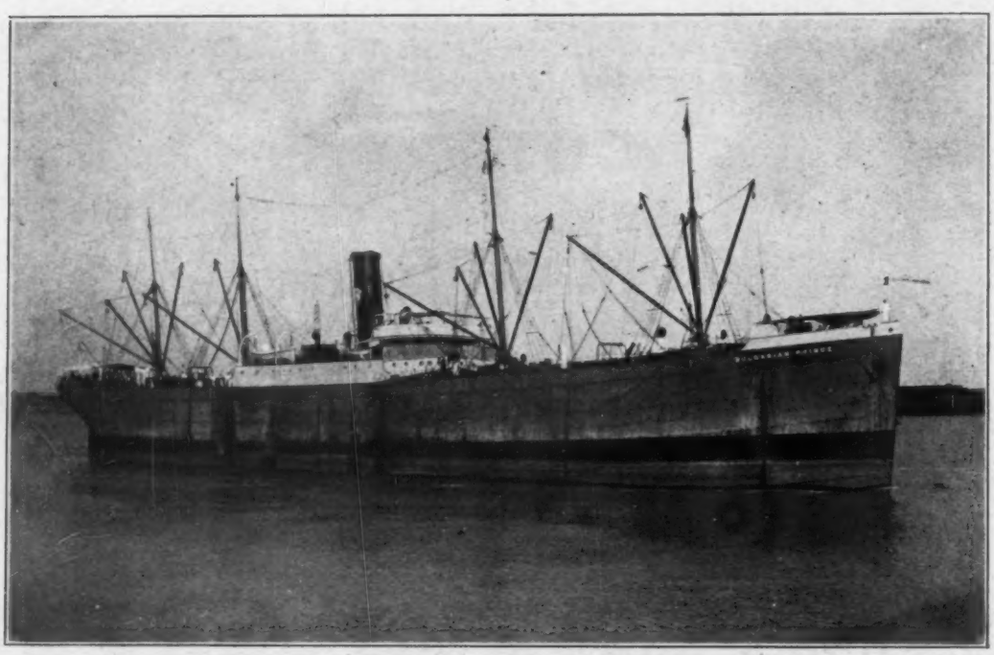
AGENTS FOR

ELDER, DEMPSTER & CO., Ltd, Liverpool England

THE PRINCE LINE, Ltd. London, England

TITLE GUARANTEE BUILDING

## NEW ORLEANS, U. S. A.



**ELDER, DEMPSTER & CO., LTD.**

REGULAR MONTHLY SERVICE FROM NEW ORLEANS AND MOBILE TO U. K. AND CONTINENTAL PORTS.

**PRINCE LINE, LTD.**

REGULAR MONTHLY SERVICES, BRAZIL TO NEW ORLEANS WITH COFFEE; NEW ORLEANS TO U. K. CONTINENT AND RIVER PLATE.

***Established 1890***

JAKE H. LEVY MARSHALL ARONSON H. A. WHITE L. LEVY
IN COMMENDAM

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# COTTON

*305 BARONNE STREET*

*NEW ORLEANS*

*MEMBERS*
*New Orleans Cotton Exchange.*
*New Orleans Future Brokers' Association*

*PRIVATE WIRES*

*TO ALABAMA AND MISSISSIPPI POINTS*

THE

# Texas Transport & Terminal

## COMPANY, Inc.

**SHIP BROKERS AND STEAMSHIP AGENTS**

*Steamship Services to principal Foreign Ports.*

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W. H. Hendren, *Local Manager* New Orleans, La.
F. H. Sage, *Local Manager* Galveston, Texas.
Thomas Rice, *Local Manager* Mobile, Alabama.

*Compagnie Generale Transatlantique to Havre.*
*Holland-American Line to Rotterdam.*
*Creole Line to Genoa.*

*CABLE ADDRESS "TERMINAL" ALL OFFICES.*

# SIMPSON, SPENCE & YOUNG,

*General Managers,* *NEW YORK*

# NEW ORLEANS LOAN AND INVESTMENT CO.

*INCORPORATED UNDER THE LAWS OF LOUISIANA*

**326 BARONNE STREET** **NEW ORLEANS**

**Authorized Capita : : : $250,000**

## *OUR INDUSTRIAL PLAN*

**MEETS THE REQUIREMENTS OF EVERYONE**

***To Work, Save and Invest Brings Success***

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*You should investigate and consider our Stocks for Investment of your surplus funds*

## *SAFE AND PROFITABLE*

# ANDERSON, CLAYTON & COMPANY

*Cotton Merchants*

Oklahoma City
Houston

Savannah
Atlanta

New Orleans
Boston

# *Anderson, Clayton & Fleming*

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NEW YORK, N. Y.

*MEMBERS:*
*New York Cotton Exchange*
*New Orleans Cotton Exchange*

*ASSOCIATE MEMBERS*
*Liverpool Cotton Association, Ltd.*

ESTABLISHED 1872

# H. & B. BEER

## NEW ORLEANS

HENRY BEER
J. WILLIAM BARKDULL

EDGAR H. BRIGHT
C. MORGAN ABRAMS

MEMBERS OF

NEW ORLEANS COTTON EXCHANGE
NEW ORLEANS FUTURE BROKERS' ASSOCIATION
NEW YORK STOCK EXCHANGE
NEW YORK COTTON EXCHANGE
NEW YORK COFFEE AND SUGAR EXCHANGE, INC.
NEW YORK PRODUCE EXCHANGE
CHICAGO BOARD OF TRADE

Special attention given to orders on above Exchanges.

Associate Members of the Liverpool Cotton Association.

PRIVATE WIRES TO PRINCIPAL POINTS

THE employees of this big mill are like a big happy family. Fair treatment is accorded to all. Pleasant surroundings and modern conveniences contribute to proper physical and moral conditions.

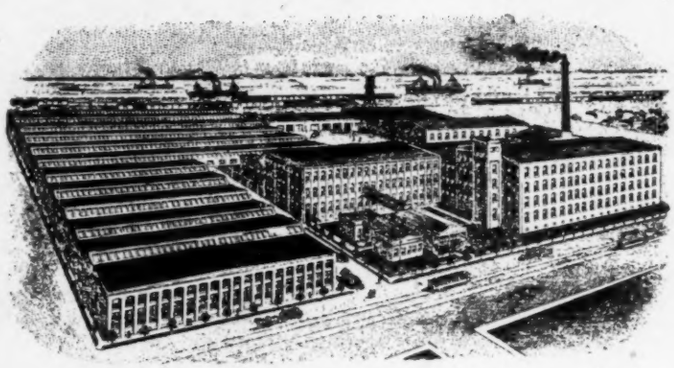
The Welfare Department is in charge of a lady and nurse and consists of rest room, reading room, circulating library, etc. A swimming tank and marble shower baths are at the disposal of employees winter and summer. Dancing with Brass Band music is afforded every Thursday evening.

A first-class restaurant that is clean and sanitary provides meals at nominal prices.

For a few cents weekly premium each employee is entitled to free services of a dentist and physician and this small premium also provides $5.00 a week in case of sickness and $40.00 in case of death.

A Pension System and a Savings Club are other features which hold this big family together and contribute to a larger production of better goods.

# LANE
## COTTON MILLS COMPANY
## NEW ORLEANS, LA.



*A. FRANKLIN PUGH* *J. CLIFFORD LYONS*

# *PUGH-LYONS & CO.*

## *COTTON MERCHANTS*

***Special attention given to orders from mills.***
***Staple cotton, low grades, high grade hosiery cotton***

*OFFICE*
*826 PERDIDO ST.*

*NEW ORLEANS, LA.*
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# C. F. WITHERSPOON & SONS

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**Domestic - - - - - - Export**

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WEBB FLOYD SIDNEY J. WHITE

# WELD & WHITE
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819 Gravier Street NEW ORLEANS

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# Geo. H. McFadden & Bro.'s Agency

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**CABLE ADDRESS "MACWEST"**

*ALEX HYMAN* *MIKE S. HART* *CARL WOESTE*

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HIBERNIA BANK BUILDING
NEW ORLEANS

# WELLINGTON, SEARS & CO.

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406 Whitney Central Bldg., NEW ORLEANS, LA.

BOSTON NEW YORK CHICAGO
PHILADELPHIA ST. LOUIS SAN FRANCISCO

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Shawmut Mill
Fairfax Mill
Riverdale Cotton Mills
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# Frederick Leyland & Company, Limited

# LEYLAND LINE

NEW ORLEANS, LA.

SAILINGS FOR

**LIVERPOOL**
**MANCHESTER**
**LONDON**

E. E. PREVOST,
General Passenger Agent

M. J. SANDERS,
Manager

1210-12 HIBERNIA BANK BUILDING.

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CODES
A. B. C. 5th, WATKINS
W. U. 5 LETTER
CABLE ADDRESS
"LYKES"

OFFICES
TAMPA, FLA.
HAVANA, CUBA
GALVESTON, TEXAS
NEW ORLEANS, LA.
NEW YORK, N. Y.

# *LYKES BROTHERS, INC.*

*S/S AGENTS AND OPERATORS*

*REGULAR SERVICE*

*NEW ORLEANS*

*TO*

*LONDON AND ROTTERDAM*

*(SEMI-MONTHLY SAILINGS)*

ALL Cotton Mills in the City of New Orleans are using electric power, totaling about 5000 H. P. furnished by the N. O. Railway & Light Co.

The services of our Engineers are at your disposal without cost or obligation upon your plant.

Please submit your problems to us.

New Orleans Railway & Light Co.
201 BARONNE ST. NEW ORLEANS, LA.

CONRAD KOLB,
Proprietor

Kolb's

RESTAURANT

125 ST. CHARLES ST.,
NEW ORLEANS, LA.

*KNOWN THE WORLD OVER*

From the Farm to the Table

Kolb's Poultry Farm located on Gently Road. Visitors welcome

R. C. STONE, PRES.
F. J. DUFFARD, V. PRES.
R. J. MCDONOUGH, SEC. & TRES.

CODES:
SHEPPERSONS
1878—91—1915

# THE STONE FORWARDING CORPORATION

**FREIGHT BROKERS AND FORWARDING AGENTS**
**AMERICAN NATIONAL INSURANCE BUILDING**
**GALVESTON, TEXAS**

## *PROMPT, EFFICIENT SERVICE*

*FREIGHT RATES QUOTED AND OCEAN SPACE ENGAGED WITH ANY AND ALL STEAMSHIP LINES SERVING GALVESTON*

---

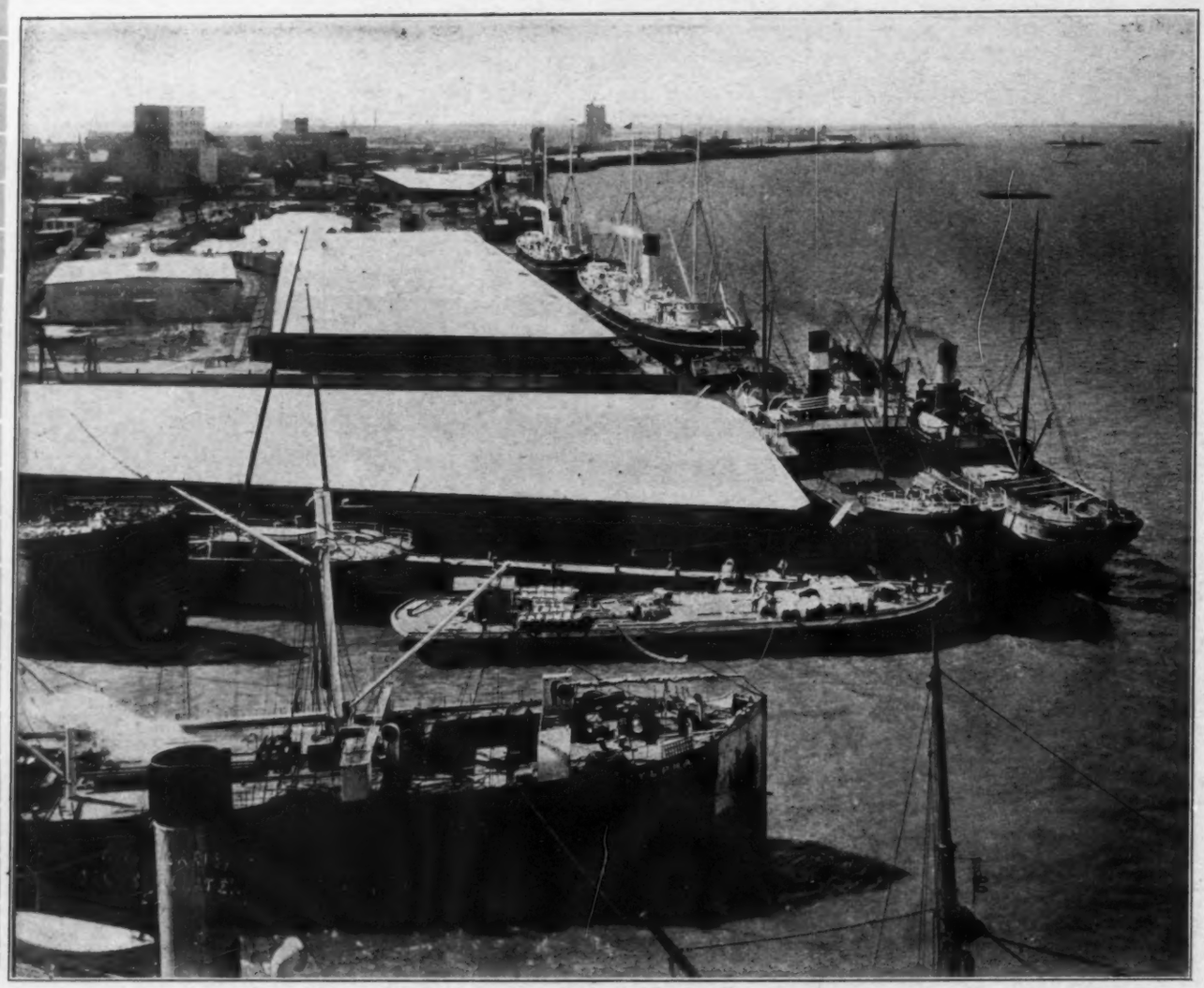
*An Experienced and Competent Shipping Department is Maintained for the Handling of the Exchange and Banking of Documents, Supervising, Tracing and Delivering of Shipments*

---

Our Mr. Stone has been for ten years associated with The J. H. W. Steele Company in charge of freight contracting and export forwarding at Galveston and recently manager of their New York Office.

Our Mr. Duffard has been for fifteen years associated with the Elder-Dempster Steamship Line in charge of the shipping department of that line at Galveston.

*Cotton Exporters requirements in all respects are assured prompt, efficient and courteous handling.*



HARBOR SCENE.

# GALVESTON, TEXAS

***The greatest Cotton Port in the world***

| | Galveston | New Orleans | Savannah | New York | Charleston |
|---|---|---|---|---|---|
| 1909 | 3,255,825 | 1,927,931 | 921,739 | 423,193 | 82,759 |
| 1910 | 2,114,158 | 1,232,641 | 776,457 | 596,741 | 116,006 |
| 1911 | 2,689,981 | 1,517,277 | 896,197 | 889,376 | 125,985 |
| 1912 | 3,673,394 | 1,595,916 | 1,786,580 | 674,220 | 249,864 |
| 1913 | 3,876,936 | 1,355,347 | 839,064 | 579,185 | 224,721 |
| 1914 | 3,347,675 | 1,710,503 | 1,515,402 | 430,201 | 309,088 |
| 1915 | 3,853,174 | 1,522,875 | 1,468,915 | 418,538 | 254,419 |
| 1916 | 1,953,510 | 1,165,238 | 531,717 | 680,887 | 87,202 |
| 1917 | 1,862,236 | 1,143,843 | 542,501 | 823,156 | 23,533 |
| 1918 | 791,338 | 725,888 | 668,564 | 901,677 | *203,879 |
| 1919 | *2,057,368 | *1,621,771 | *1,150,616 | * 12,970 | *218,228 |
| Total Exports | 29,475,595 | 15,519,230 | 11,097,752 | 6,430,144 | 1,895,684 |

**Cotton receipts—exports not yet tabulated.*

The storage facilities at Galveston can house over ***a million bales on end.*** Cotton stored in Galveston is immediately available for shipside delivery and can be weighed and inspected just prior to shipment, thus obviating claims from abroad.

For any information concerning cotton handling at this port address:

## The Cotton Concentration Co.

**The largest concentrators of cotton in the south.**

**Galveston, Texas**

# *HARRISS, IRBY & VOSE*

## *COTTON MERCHANTS*

## *BUYERS : : : EXPORTERS*

---

*New York Office, 15 Williams St.*
*Boston, . . . . . Mass.*
*Savannah, . . . . . Ga.*
*New Orleans, . . . . . La.*
*Galveston, . . . . . Texas*

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*ALSO OFFICES THROUGHOUT EUROPE*

# Seaboard Transportation & Shipping Company

## ENGINEERS AND SHIPBUILDERS
## FOUNDERS AND MACHINISTS

*Complete Plate, Machine and Blacksmith Shops*
*Complete Electric Welding*
*Oxy-Acetylene Welding*
*Steel and Wooden Ships Built and Repaired*
*Deep Water along Side of Plant*
*Operators of Oil Barges and Tugs*
*Vessels Chartered, Bought and Sold*

*Builders of*

*Steel Tanks*
*Steel Stacks*
*Steel Dredge Pipe*
*Steel Oil and Water Tanks of all kinds.*
*Steel Boilers*

## GALVESTON, TEXAS
THE "LET'S GO" PORT

**MAIL ADDRESS:**
AMERICAN NAT. BLDG

**CABLE ADDRESS**
"SEATRAPCO" Galveston

**PLANT:**
Pelican Spit Channel Dike

**CODE:**
W. U. 5 Letter Edition

# HARRISON LINE

OF STEAMERS

## GALVESTON
TO
## LIVERPOOL

## WM. PARR & CO. AGENTS.
GALVESTON, TEXAS.

# PINILLOS LINE

***GALVESTON TO BARCELONA***
***And Other Mediterranean Ports***

## E. SEVILLA & SON, AGENTS
**GALVESTON, TEXAS**

## PILILLOS, IZQUIERDO Y CA
S. EN C., CADIZ

"INFANTA ISABEL," "CONDE WIFREDO," "MIGUEL M. PINILLOS," "BARCELONA,"
"CATALINA," "BALMES," "VALBANERA,"
"MARTIN SAENZ," "CADIZ."

# LEYLAND LINE

OF STEAMERS

*First-Class Liner Insurance Guaranteed*

**GALVESTON TO LIVERPOOL**

AND CONTINENTAL PORTS

For Freight, Passage, Etc. Apply to

***Fred'k Leyland & Co., Limited Agency***

*I. A. HICKEY, Mgr., Private Phone 1010*

OFFICE: COTTON EXCHANGE BUILDING
Cor. 21st and Mechanic

*PHONE 497*

# TEXAS STAR FLOUR MILLS

GALVESTON, TEXAS

EST. 1878

*The Largest Wheat and Corn Products Factory in the Southwest.*
*Capacity 5,000 Barrels Daily.*

MANUFACTURERS OF

THE CELEBRATED STAR BRAND FLOUR

Every package of our product is guaranteed to be *Perfectly Milled* and *Strictly Uniform.*

WE SELL AND SHIP TO ALL PARTS OF THE WORLD

The location of our plant places us in an ideal position to serve dealers in flour throughout the Southeastern Territory.

INQUIRIES FOR PRICES WILL BE APPRECIATED

CODES:
A. B. C. 5th WATKINS
W. U. 5 LETTER

CABLE ADDRESS
"LYKES"

OFFICES

TAMPA, FLA.
HAVANA, CUBA
GALVESTON, TEXAS
NEW ORLEANS, LA.
NEW YORK, N. Y.

# LYKES BROTHERS

S/S AGENTS AND OPERATORS

REGULAR SERVICE

(SAILINGS SEMI-MONTHLY)

***GALVESTON***

*TO*

***BREMEN AND BARCELONA***

AGENTS

KERR STEAMSHIP COMPANY, INC.

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# H. NUSSBAUM

**COTTON**

**GALVESTON, TEXAS**

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# S. SGITCOVICH & CO.

**STEAMSHIP AGENTS**

**GALVESTON, TEXAS**

W. F. BEERS A. KENISON J. D. HODSON A. KENISON, JR.
(Established 1879)

**BEERS, KENISON & CO.**

GENERAL AGENTS

Southwestern Dep't Galveston, Texas

**FIRE AND MARINE INSURANCE**

(All losses adjusted and paid by this office)

**GALVESTON COAL COMPANY**

GALVESTON, TEXAS

*We coal the vessels at the largest cotton port in the world*

**PROMPT SERVICE** **EXCELLENT COAL**

*No delay—we bunker the vessel while she loads her cargo.*

# GALVESTON, TEXAS

THE GREATEST COTTON PORT IN THE WORLD

The storage facilities at Galveston can house over 1,000,000 bales on end. Cotton stored in Galveston is immediately available for shipside delivery and can be weighed and inspected just prior to shipment, thus obviating claims from abroad.

# The Fort Worth National Bank

## *FORT WORTH, TEXAS*

**UNITED STATES DEPOSITORY** **Established 1873**

| | |
|---|---|
| Capital . . . . | $ 600,000.00 |
| Surplus and Profits | $ 1,500,000.00 |
| Deposits . . . | $ 17,000,000.00 |

**OFFICERS**

**K. M. VAN ZANDT, President.**

**ELMO SLEDD, Vice Pres.**
**R. E. HARDING, Vice Pres.**
**E. B. VAN ZANDT, Vice Pres.**
**W. M. MASSIE, Vice Pres.**
**T. J. CALDWELL, Vice Pres.**
**R. W. FENDER, Cashier.**
**RAYMOND C. GEE, Asst. Cash.**
**H. P. SANDIDGE, Asst. Cash.**

The marvelous oil development and the splendid crops are making the territory tributary to Fort Worth the most prosperous in the Country. The commercial and industrial opportunities can be appreciated only by a personal visit.

We make it our primary effort to be of every possible assistance to our visiting friends, and extend a cordial invitation to bankers and business men to visit us and see the development we are enjoying.

FORT WORTH SECTION

# HAMILTON COTTON COMPANY

*FORT WORTH, TEXAS*

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Branch Offices

*New York*
*Austin, Texas*

*New Orleans*
*Houston, Texas*

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Cable address "Hamilco"

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OFFICERS

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T. B. YARBROUGH, VICE-PRES.
W. P. ANDREWS, CASHIER
R. C. MARTIN, ASST. CASHIER
W. H. WALLERICH, ASST. CASHIER
W. J. DYER, ASST. CASHIER
F. W. POWELL, ASST. CASHIER
R. M. BOWEN, ASST. CASHIER

# The First National Bank

*of Fort Worth, Texas*

Capital and Surplus . . . $1,500,000.00

Total Resources . . . . . 20,000,000,00

An institution courteous, accommodating and thoughtful of the best interests of its customers. By reason of our forty-five years of experience and growth, and our very large country banking connections, we are justly qualified to serve the cotton manufacturer, the cotton buyer, the cotton broker and the cotton exporter.

# TOM B. OWENS & CO.

## *COTTON*

## FORT WORTH,

## TEXAS

CABLE ADDRESS "OWENS"

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CODES

MEYER'S ATLANTIC 39TH
SHEPPERSON'S 1878-1881

MEMBER

NEW YORK COTTON EXCHANGE
FORT WORTH COTTON EXCHANGE
TEXAS COTTON ASSOCIATION

*NEW YORK OFFICE*
*15 WILLIAM STREET*

# *H. T. WILLIAMS & CO.*

## AMERICAN HEADQUARTERS

*FORT WORTH, - - - - - - - TEXAS*

---

## *WILLIAMS, WILSON & CO.,*

*LIVERPOOL, ENGLAND*

*H. T. WILLIAMS* *G. E. WILSON*

---

**Texas, Oklahoma and Arkansas Cotton.**

# GOSHO COMPANY

**INCORPORATED**

## FORT WORTH, TEXAS

**CABLE ADDRESS: "GOSHO."**

**AGENCY**

## *GOSHO KABUSHIKI KAISHA*

*Head Office; Osaka, Japan*

With Branches:

New York, Kobe, Yokohama, Tsingtau, Tientsin, Hankow, Shanghai, Bombay, Calcutta.

Our Agencies and Branch Offices:

New York, Seattle, Galveston, Greenville, Corsicana, Austin, Paris, Waco.

## GOSHO COMPANY, INC.

# J. A. CHAPMAN

***COTTON BROKER***

AND

***BUYER and SHIPPER of Low Grades***

*Snapped and Bollie Cotton*
*A specialty.*

Offices;

Cotton Exchange Building

FT. WORTH

# K. TIDEMANN & CO., INC.

***Cotton Buyers and Shippers***

MEMBERS

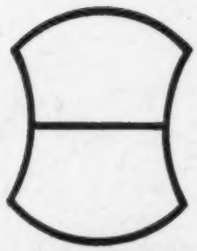
NEW YORK COTTON EXCHANGE

NEW ORLEANS COTTON EXCHANGE

***Fort Worth, Texas*** ***New Orleans, La.***

Concentrating and Shipping Office

*Galveston, - - - - - Texas*



## JAPAN COTTON TRADING CO. OF TEXAS

***COTTON EXPORTERS FORT WORTH, TEXAS***

Cable Address: "MENKWA FORTWORTH"

***AGENCIES***

New York City

| | | |
|---|---|---|
| New Orleans, La. | San Antonio, Texas | Brownwood, Texas |
| Seattle, Wash. | Waco, Texas | Oklahoma City, Okla. |
| Abilene, Texas | Greenville, Texas | Hobart, Okla. |

**Agency for Nippon Menkwa Kabushiki Kaisha**
**(The Japan Cotton Trading Co., Ltd.)**
**Osaka, Japan.**

B. G. VAUGHN D. T. SHIRLEY R. C. UNDERWOOD

# FORT WORTH COTTON CO.

201-2-3 GRAIN & COTTON EXCHANGE BUILDING

FORT WORTH, : : : : : : TEXAS

The marvelous oil development, and the splendid crops are making the territory tributory to Fort Worth the most prosperous in the country. The commercial and industrial opportunities can be appreciated only by a personal visit.

# HOUSTON

## The Metropolis of Texas

*"Where Eighteen Railroads*
*Meet the Sea."*

HOUSTON'S SKYLINE

| | |
|---|---|
| Houston's Population 1910 | 78,400 |
| Houston's Population 1919 | 174,000 |
| Increase | 122% |

## Houston has 6 National and 7 State Banks

| | |
|---|---|
| With a total Capital of | $ 8,275,000.00 |
| Aggregate Resources | 92,243,275.00 |

## One Branch Federal Reserve Bank

Capital Carried at Dallas.

| | |
|---|---|
| Resources Federal Reserve Bank | $16,000,000.00 |

## One Federal Farm Loan Bank

| | |
|---|---|
| Capital | $ 2,000,000.00 |
| Reserve | 34,500,000.00 |

---

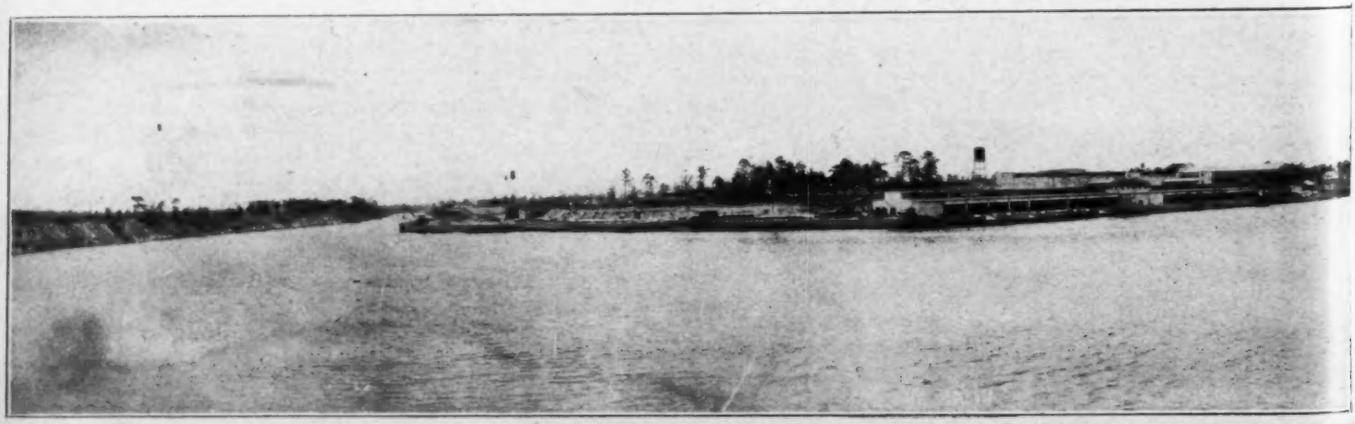
| | |
|---|---|
| Houston Bank Clearings 1917 | $703,647,251.00 |
| Houston Bank Clearings 1918 | 791,351,619.00 |
| Increase | 87,704,368.00 |

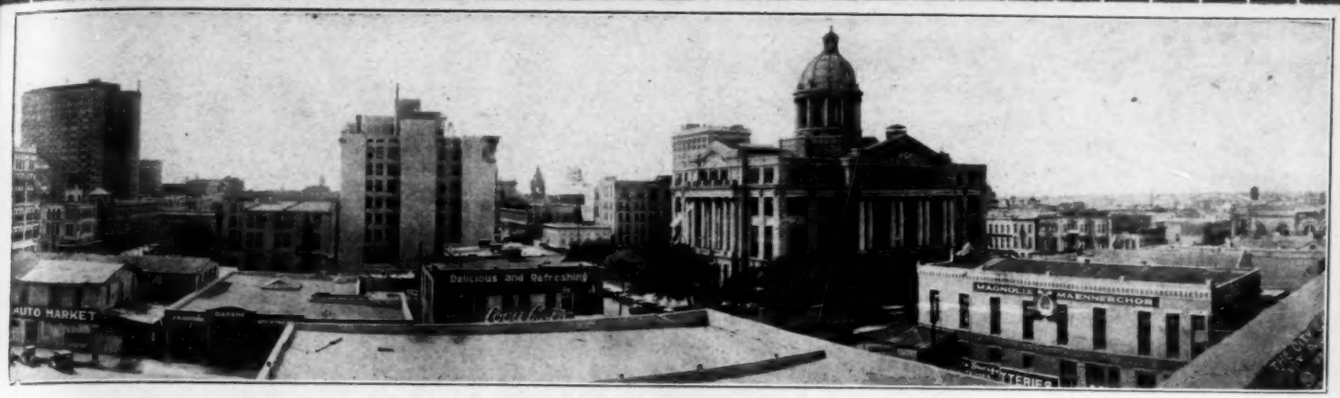
## Distance from Houston to Gulf of Mexico

| | |
|---|---|
| Via Houston Ship Channel | 50 Miles |
| Ruling Dept of Channel | 25 Feet |
| Width of Channel at bottom | 150 Feet |
| Cost of Channel to Jan. 1st, 1919 | $5,500,000.00 |
| Improvements Contemplated to cost | $2,500,000.00 |
| Depth projected | 30 Feet |
| Number of Industries located on Channel | 41 |
| Number of Employes | 5,592 |
| Annual Pay Roll | $8,828,000.00 |
| Number of Refineries located on Channel | 18 |

*We have not taken into account the transactions of private banks and trust companies.*

WATER FRONT AT HOUSTON SHOWING MUNICIPAL






HOUSTON'S SKYLINE

Houston is the Largest Inland Cotton Port in the world.

Houston physically handles approximately 1,000,000 bales of cotton yearly.

Houston draws cotton from the entire States of Texas and Oklahoma as well as Arkansas and Louisiana.

Houston has 8 Compresses, 6 of which are equipped for high density.

Houston has a total storage capacity in Compresses and Warehouses of 600,000 Bales.

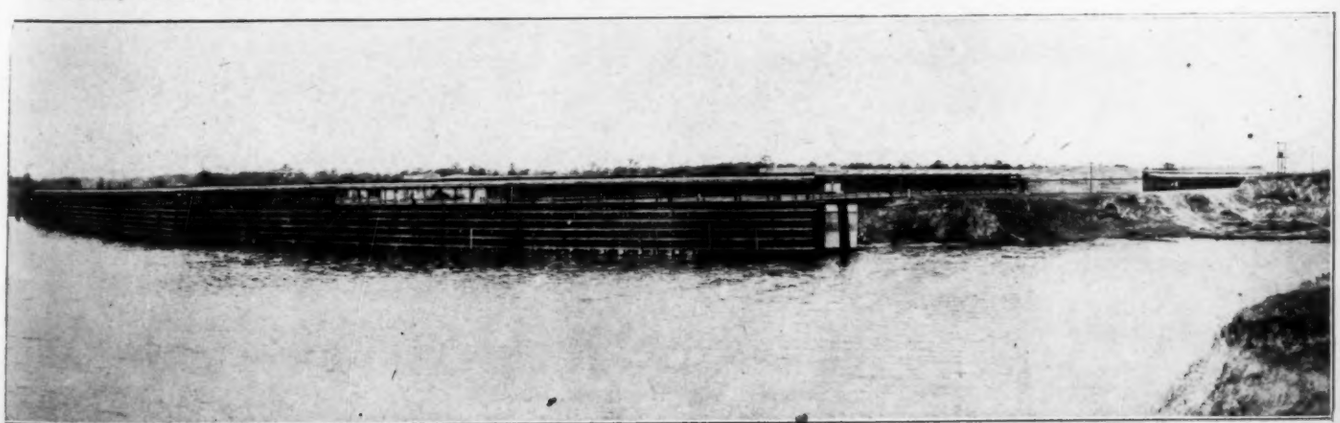
Houston has 70 Cotton firms shipping to every cotton consuming country in the world.

Houston's net receipts for season 1918-19 was 1,066,-979 Bales.

All inquiries will receive courteous attention.

Houston Cotton Exchange
Houston Chamber of Commerce

DOCKS, WHARVES, AND COTTON WAREHOUSES.



# ANDERSON, CLAYTON & COMPANY

*Cotton Merchants*

| | | |
|---|---|---|
| Oklahoma City | Savannah | New Orleans |
| Houston | Atlanta | Boston |

# *Anderson, Clayton & Fleming*

15 WILLIAM STREET

NEW YORK, N. Y.

*MEMBERS:*

*New York Cotton Exchange*
*New Orleans Cotton Exchange*

*ASSOCIATE MEMBERS*

*Liverpool Cotton Association, Ltd.*

# *HUBBELL SLACK & CO.*

COTTON MERCHANTS

AND EXPORTERS

*HOUSTON, : : : TEXAS*

---

MEMBERS:

*New York Cotton Exchange*

*New Orleans Cotton Exchange*

---

AGENCIES:

*Hubbell-Slack & Co., Savannah, Ga.*

*Weatherford-Crump & Co., New Orleans, La.*

*James L. Crump, Genoa, Italy*

*ORGANIZED 1866*

# *THE FIRST NATIONAL BANK*

## OF HOUSTON

| | |
|---|---|
| Capital Stock - - - - - - | $ 2,000,000 |
| Surplus and Profits - - - - | 600,000 |
| Deposits - - - - - - | 20,000,000 |

### OFFICERS

J. T. SCOTT, President

F. M. LAW, Vice-President

W. S. COCHRAN, Vice-President

F. E. RUSSELL, Cashier

G. G. TIMMINS, Ass't Cashier

J. L. RUSSELL, Ass't Cashier

H. B. BRINGHURST, Ass't Cashier

J. W. HAZARD, Ass't Cashier

O. W. JACKSON, Ass't Cashier

### DIRECTORS

J. T. SCOTT
F. M. LAW
E. A. PEDEN
E. L. NEVILLE
F. A. ROOT
W. S. COCHRAN
F. E. RUSSELL

# THE GROWING BANK OF TEXAS

**COTTON ACCOUNTS** **OUR SPECIALTY**

OFFICERS

J. S. RICE, President
T. C. DUNN. Vice-Pres.
D. W. COOLEY, Vice-Pres.
ABE M. LEVY, Vice-Pres.
H. B. FINCH, Cashier
HUGH WOOD, Asst. Cashier

OFFICERS

GEO. HAMMAN, Vice-Pres.
W. T. CARTER, Vice-Pres.
C. G. PILLOT, Vice-Pres.
C. A. DWYER, Asst. Cashier
J. F. FOWLER, Asst. Cashier

## The Union National Bank, HOUSTON, TEXAS

***CAPITAL : : : : : : : $1,000,000.00***

J. M. DORRANCE
E. L. NEVILLE

J. K. DORRANCE
W. L. VAN LIEW

# DORRANCE & CO.

## *COTTON EXPORTERS*

P. O. BOX 334

HOUSTON, : : : : : : TEXAS

# ALEXANDER SPRUNT & SON

INCORPORATED

*WILMINGTON,* *NORTH CAOLINA*

COTTON

ESTABLISHED 1866.

NEW YORK
HOUSTON, TEXAS
CHARLOTTE, N. C.
SAVANNAH, GEORGIA
HAVRE, FRANCE
ROTTERDAM, HOLLAND

*Texas-Oklahoma Headquarters*

*HOUSTON*

# T. A. JOHNSON & CO.

*COTTON*

HOUSTON, - - - - TEXAS

BRANCHES

| | |
|---|---|
| PARIS, TEXAS, - - - - - - - | Wise Bldg. |
| BOSTON, MASS. - - - - - - - | 54 Kilby St |
| NEW ORLEANS. - - - - - - - | 826 Gravier St |

MEMBERS

New Orleans Cotton Exchange  Texas Cotton Association

# W. M. WARD & COMPANY

---

## *COTTON FACTORS*

---

HAMILTON BUILDING

HOUSTON, . . TEXAS

# MEMPHIS

## The Great Southern Gateway—East to West

***Population 224,000—and Growing***

Memphis is the largest inland cotton market handling actual cotton in the South. Receipts run 700,000 to 1,000,000 bales per year.

These receipts will be materially increased when the opening of ten million acres of land in the St. Francis Valley is finished. This Valley has been protected by secure levees and is being rapidly developed.

As a market for short fiber cotton, such as linters and cotton hull fibre, there is no other market in the world that can compare to Memphis. There are more fiber mills in Memphis than in any other city in the world and the trade in linters is far above the trade of any other market. Over one-half of the total crop of the country is sold through Memphis concerns.

Memphis is also the market for the fine long staple cotton grown in the rich Yazoo and Mississippi River Deltas. This long staple cotton is much sought after and is used in making the best grade of cotton goods.

A statement of the Memphis Cotton Exchange issued on July 31st, 1919, shows the total value of the year's receipts, $77,509,347.00.

Memphis foreign exports aggregate approximately $100,000,000 annually, and these exports include 500,000 to 700,000 bales of cotton. It is the home of the world's largest cotton warehouse, which is operated by the Memphis Terminal Corporation.

Transportation facilities are unexcelled by any city South of the Ohio River. Memphis is served by ten main systems operating seventeen lines of railroad, in addition to the Mississippi River with its Government barge line. The only bridges crossing the Mississippi River south of the Ohio River are located here, making Memphis the gateway to and from the West and South West. Owing to its geographical and other advantages Memphis has much lower freight rates in and outbound than accorded other cities.

Memphis has eighteen banks and trust companies with $75,000,000 deposits and a total annual volume of business aggregating $3,441,112,356.56 last year. The city has eight hundred manufacturing industries, employing 31,500 men and women, and to show the rapidity of its growth more than ninety industries were located in Memphis with the cooperation of the Chamber of Commerce during the current year.

Normal labor conditions in Memphis are unsurpassed. 99% of the population is native born. This is a natural labor center, there being no other city of considerable size within 132 miles. Labor is attracted here from the numerous railroad towns in all directions and from points north and south on the river.

Memphis draws her coal supply from Western Kentucky, Southern Illinois and Alabama, over six coal bearing railroads and also from East St. Louis on barges into this well situated market. There is always an ample supply on hand.

Health and living conditions are very favorable. The city is located on a bluff overlooking the river and is supplied with pure artesian water by the largest artesian water system in the world, which water is used for all purposes.

Memphis has the most active Chamber of Commerce in the South, with membership of 3,500. Its function is to help you. Write for further information.

## Memphis Chamber of Commerce

**Memphis, Tennessee**

# Delta & Pine Land Co.

*OF MISSISSIPPI*

---

*THE LARGEST*

## *COTTON PLANTATIONS*

*IN THE WORLD*

*Located at Scott, Miss.*

*Originators of*

*Delinting Cotton Planting Seed*

*and Largest Shippers of*

*COTTON PLANTING SEED*

*in America*

---

*EXECUTIVE OFFICES*

***MEMPHIS, - - TENN.***

# SINCE '69

—when the receipts at this market were only 250,000 bales annually, this bank has been closely linked with the cotton trade.

Of late years we have made particular efforts to expand our service to the trade, having established a Foreign Department, and a "Cotton Department" which gives its entire attention to loans on cotton and allied products.

The cotton dealers and planters of this section can testify that our resources—over Thirty Million Dollars—and our notion of "Service" harmonize to merit the business and friendship of the cotton trade.

**UNION & PLANTERS BANK & TRUST COMPANY**

MEMPHIS, TENN.

*MEMBER FEDERAL RESERVE SYSTEM*

CODES
MEYERS 39th
SHEPPERSON '78-'15
A. B. C. 5th.

CABLE ADDRESS
"AIKEN" MEMPHIS

# WARWICK AIKEN & CO.

## COTTON

MEMPHIS, : : : : TENN.

Mississippi, Arkansas and Tennessee Cotton of superior quality for American Mills and Export

# BOYCE & CO.

"PLANTERS"

# COTTON

---

*COTTON SHIPPERS*

Memphis, Tenn.

Clarksdale, Miss.

Manchester, England

New Bedford, Mass.

and Branches.

# *Bank of Commerce & Trust Co.*

*MEMPHIS,* *TENN.*

T. O. VINTON, President.
R. BRINKLEY SNOWDEN, Vice President
E. L. RICE, Vice President
FRED COLLINS, Vice President
L. A. THORNTON, Cashier
LEW PRICE, Assistant Cashier.

JNO. T. WILKINSON, Assistant Cashier
A. C. BURCHETT, Assistant Cashier
S. J. SHEPHERD, Trust Officer
J. N. FOOTE, Auditor
JAS. H. FISHER, Secretary
J. R. PIPES, Treasurer

**Capital, Surplus and Undivided Profits over three and one-half million dollars.**

# COTTON

We want your business. We have handled a large number of cotton accounts for a long time, satisfactorily, and can with assurance, solicit any branch of the cotton industry, here or overseas, desiring a sound, sensible and courteous banking connection.

# Newburger Cotton Company,
## INC.

*MEMPHIS, TENNESSEE*

***Pioneer Buyers and Exporters***

For forty years we have supplied spinners all over the world with

## COTTON OF CHARACTER

---

Thirty branches throughout the best cotton producing sections of the Belt.

*MEMBERS*

*New York, New Orleans, Memphis Cotton Exchanges.*

*Associate Member, Liverpool Cotton Exchange.*

# *F. L. PAGE &*
# *COMPANY*

## COTTON

## EXPORT AND DOMESTIC

*432 Falls Building*

*MEMPHIS, : : : : TENN.*

*CABLE ADDRESS "LES-PAGE"*

# *Service For Cotton Exporters*

With executive offices at Memphis, Tenn., in the heart of the long staple cotton producing region, and with a corps of experts at New Orleans and other ports, we are in a position to offer Extraordinary Service to cotton exporters.

Our competent staff will supervise the movement of your freight from point of origin to ultimate destination. We will engage your space and issue through bills of lading on shipments for all open ports in the world.

Warehouses at convenient points at your disposal. We can quote low rates on marine insurance. If you want SERVICE, let us handle your export business.

## American Overseas Forwarding Co.

***Ocean Freight Brokers & Forwarding Agents***

J. H. Townshend, President. B. F. McCamey, V. P. Memphis, Tennessee. C. A. New, Sec'y.-Treas.

R. R. O'Rourke, General Manager, New Orleans, La.

J. S. Thompson, V.P., Louisville, Ky.

A. C. Bowen, V.P., New Orleans, La.

J. A. Koehler, G. A., Helena, Ark.

CABLE ADDRESS: "OVERSEAS"

CABLE ADDRESS: "OVERSEAS."

CABLE ADDRESS
"BARNWELL" MEMPHIS

ESTABLISHED 1886

# BARNWELL & COMPANY

*104 S. Front Street*

*MEMPHIS, - - - - TENN.*

## Cotton Shippers and Exporters

*Selecting Benders and Staples a Specialty*

---

MISSISSIPPI CORRESPONDENTS:

## *BARNWELL BROTHERS*

*AT*

*GREENWOOD, CLARKSDALE, ITTA BENA, YAZOO CITY, INDIANOLA, RULEVILLE*

BRANCHES:

New Orleans, La. Pine Bluff, Ark. Forrest City, Ark.

And all principal points of Texas.

# GOOLD & CO.

*Head American Office*

*71 Madison Avenue*

*MEMPHIS,* *TENN.*

## Merchants and Exporters

*To Our Own Firm*

## JOHN C. GOOLD & CO.

*LIVERPOOL,* *ENGLAND*

JNO. E. ROBERTS WM. D. ROBERTS LEO G. CARTER

# ROBERTS, CARTER & COMPANY

## COTTON

*Cable Address "Roberts"*

*Memphis, - - - - Tenn.*

## Commission Merchants, Yarn Dealers, Cotton Dealers, and Brokers, Etc.


H. Ray Paige. J. A. Mandeville H. G. Welborn J. H. Schoolfield

**Southern Cotton Yarn Co., Inc.**

1 Madison Avenue, New York City

SELLING AGENTS FOR

**SOUTHERN MILLS**

**Carded—Combed Yarns**

**4's TO 120's SINGLE AND PLY**

Selling Direct to Consumer.

NEW ACCOUNTS SOLICITED.

# These Trademarks Are Guarantees of Supreme Quality Yarn

WHEN buying yarns—look for the trademark—the pride mark, of these famous spinning mills. They are your assurance of quality in every instance.

It is our aim to render the most efficient service to the trade by supplying yarns made from the best long staple cotton.
—to inspect carefully all packing and shipments.
—to give prompt attention to all inquiries.
—to see that the goods go forward at the time promised.

**Combed Peelers, 30s to 80s, single and ply. Regular and reverse twist.**
**Combed Sea Island, gassed and ungassed, 30s to 80s, single and ply, reverse twist.**
**Carded Peelers, 40s, 50s and 60s.**
**Double Carded Peelers, 30s to 60s.**

Our production is sold directly through, and exclusively by, our general sales offices at 131 East 23rd Street, New York City.

H. A. FLORSHEIM, Sales Mgr., Long Distance, 812 Gramercy.

Gray Manufacturing Co. Parkdale Mills, Inc. Arlington Cotton Mills
Arrow Mills, Inc. Flint Manfg. Co. Myrtle Mills, Inc.

**Weimar Bros.**

Phone Connections

Works, 2046-48 Amber Street,
PHILADELPHIA, PA.

MANUFACTURERS OF

Cotton Mercerized Tapes, Spool Tapes, Bindings and Narrow Fabrics for Underwear and other Trades.

# Wellington, Sears & Co.

93 FRANKLIN ST., BOSTON.
PHILADELPHIA
ST. LOUIS NEW ORLEANS

## Dry Goods Commission Merchants

66 WORTH ST., NEW YORK
CHICAGO
SAN FRANCISCO

# COTTON DUCK

## All Widths, Weights and Numbers

**Oceanic Wide Cotton Duck**
26 inches to 120 inches wide

**Oceanic and Superior Sail Duck**
22 and 24 inches wide.

**Shawmut Hose and Belting Duck**

**Dixie Shoe Ducks**
37 inches wide, 7, 7 1-2, 8, 9, and 10.38 ounce.

**Fairfax Crashes**

**Superior Army Ounce Duck**
28 1-2 and 36 inches wide, 7, 8, 9, 10, 12 and 15 ounce.

**Monarch Double Filling Duck**
29 and 36 inches wide, 7, 8, 9, 10 and 12 ounce.

**Magnolia and Cypress Single Filling Duck**
29, 36 and 40 inches wide, 7, 8, 9, 10 and 12 ounce.

**Columbus Sheetings**

**Aquapelle and Storm King Waterproofing Duck.**

## For the Jobbing, Manufacturing and Export Trade

SELLING AGENTS FOR

West Point Mfg. Co.
Shawmut Mill
Fairfax Mill
Riverdale Cotton Mills
Lanett Cotton Mills
Brookside Mills

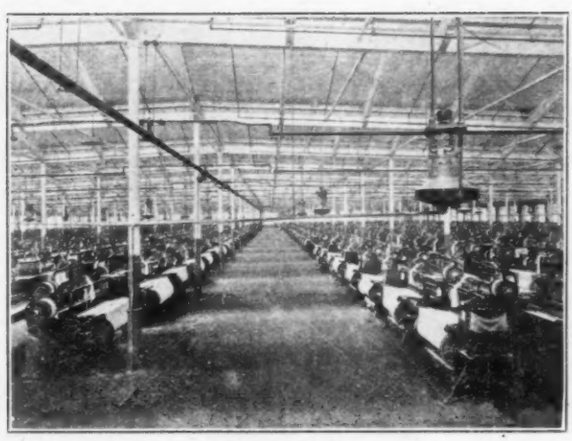
Warwick Mills
Equinox Mill
Hamilton Woolen Co.
Suncook Mills
Columbus Mfg. Co.

Gluck Mills
Liberty Mill
Dixie Cotton Mills
Sherman Mfg. Co.
New England Bunting Co.

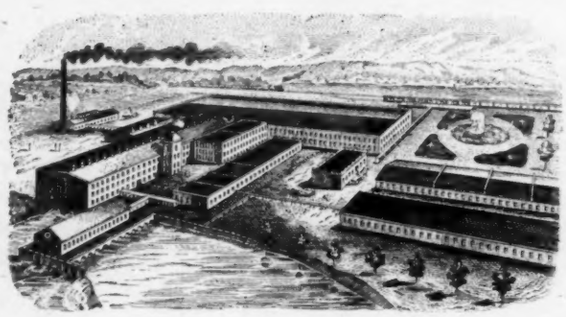
# West Point Mfg. Company

## Chambers County, Alabama

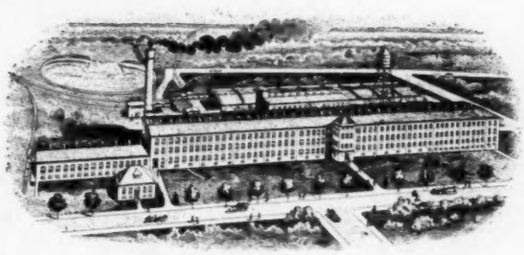
LANETT MILL



WEAVE ROOM
LANETT MILL



LANGDALE MILL



SHAWMUT MILL

## West Point Manufacturing Company

Joshua B. Richmond, President, Boston, Mass.
George H. Lanier, Vice-President and General Manager, West Point, Ga.
Horace S. Sears, Treasurer, Boston, Mass.

# Bliss Fabyan Fabrics

*Standard for many years in the markets of the world*

Laconia and Biddeford Canton Flannels.

Androscoggin 36-inch Bleached Muslin.

Hill, 36-inch Bleached Muslin and 36-inch Bleached Jeans.

Pepperell Brown and Bleached Drills.

Laconia Indigo Blue Drills, 27-inch.

Pepperell Wide Sheetings, bleached and unbleached.

Pepperell and Laconia Moleskins.

Otis Checks and Pinchecks.

American A Bags.

Otis Co. Underwear.

Boston and Bondsville Grey and Colored Ducks.

Thorndike 8-oz. Cassimeres, 28 inches wide.

Palmer 9-oz. Napped Suiting, 28 inches wide.

Palmer 8-oz. Whipcords, 28 inches wide.

Palmer and Warren Covert Cloths, 28 inches wide.

Warren Suitings, 28 inches wide.

Otis and Columbian Indigo Blue Denims, 28 inches.

Cordis and Thorndike Blue and White, and Fancy Mattress Ticks.

Palmer Linen Finish Suiting.

Shoe Fabrics

Converting Fabrics.

Sateens

Coutils.

## Bliss Fabyan & Co.

Boston New York Chicago

# American Made Textiles

We are pleased to inform buyers that we are the Selling Agents for the following mills, each of which is a leader in the class of fabrics it manufactures. Their products comprise a large line of very representative goods which are largely sold the world over.

## *Pacific Mills*

*Lawrence, Mass.* *Dover, N. H.* *Columbia, S. C.*

Trade Mark

are the largest Print Works in the world, with an unequaled output of printed dyed and bleached cotton goods of every description, including Crepes, Organdies, Lawns, Poplins, Serges, Flannels, Percales, Prints, Pongees, Shirtings. Also Drapery Sateens, Cretonnes, Silkalines, Plain and Printed Scrims, Velours, etc., and full line of bleached goods such as Nainsooks, Cambrics and Muslins.

They are also the largest manufacturers of cotton-warp and all-wool dress goods, such as Serges, Voiles, Lustres, Gabardines, Granites, Taffetas, Panamas, Linings, etc.

Trade Mark

## *Merrimack Mfg. Co.*

*Lowell, Mass.* *Huntsville, Ala.*

Trade Mark

These famous Mills, established in 1822, manufacture a comprehensive line of Plain and Fancy Cotton Corduroys, Khaki, Fustians and Velveteens; also Gray plain cloths for export. Their products, made in very many styles, colors, and finishes, command a wide sale wherever known.

Trade Mark

## *Ipswich Mills*

*Ipswich* *Lowell* *Gloucester* *Boston, Mass.* *Belmont, N. H.*

TRADE MARK

are the oldest and one of the largest Hosiery Mills in the United States. They manufacture a complete line of men's and women's seamless Cotton, Mercerized, and Silk Stockings, which are made in a large range of qualities, grades and colors.

TRADE MARK

## *Whittenton Mfg. Co.*

*Taunton, Mass.*

Trade Mark

are large manufacturers of medium priced Dress Ginghams, Jacquard Cotton Blankets, both bed and crib size, as well as men's, women's, and children's Bath Robe Blankets in a wide range of colors and patterns. Their line of animal designs for children's robes and crib blankets is particularly attractive.

Trade Mark

## *Boston Mfg. Co.*

*Waltham, Mass.*

Trade Mark

was the first complete cotton mill built in the United States. They are the leading manufacturers of fine Ginghams for women's and children's dresses. Their products are made in very many styles and command the best trade everywhere.

Trade Mark

## *Our Export Department*

is always prepared to furnish interested buyers with full information regarding any or all of the very large range of textiles produced by these leading manufacturers.

We are pleased to give particular attention to packing goods for export in different sized and carefully constructed packages to meet special requirements.

In writing, kindly be as explicit as possible, so that we may furnish exactly the information you desire.

# LAWRENCE & COMPANY

89 FRANKLIN ST., BOSTON, MASS. 24 THOMAS ST., NEW YORK

BRANCH HOUSES

PHILADELPHIA CHICAGO ST. LOUIS SAN FRANCISCO LONDON, ENGLAND

# WILLIAM L. BARRELL CO.

Royal Ins. Bldg. CHICAGO | 8 Thomas St. NEW YORK | 185 Devonshire St. BOSTON | Postal Teleg. Bldg. SAN FRANCISCO

## COTTON DUCK

| | |
|---|---|
| "TAMARAK" | Single Filling |
| "LOCKWELL" | Double Filling |
| "LAWRENCE" | Army and Wide |

## WATERPROOF FABRICS

| | |
|---|---|
| TAN-TEX-TOL | Tarpaulin Duck |
| CON-SER-TEX | Canvas Roofing |
| CON-SER-VIT | Railroad Roofing |
| METAKLOTH | Copper Metalized Cloth |

## KHAKI

OLIVE DRAB BLEACHED DUCKS

TEXTOL AWNING STRIPES

# AMOSKEAG
## Manufacturing Co.
### 34 Thomas Street, New York

AFC Gingham
Staple Ginghams
Utility Gingham
Three Star Gingham

Seersuckers
Romper Cloth
Invincible Suiting
32-inch Chambrays

---

1921 Cloth
Daisy Cloth
Smyrna Cloth
Ponceta Cloth
Panola Cloth
Fleecedown

36-inch Napped Fabrics
Tunis Cloth
Pamela Cloth
Tacuna Cloth
Trinada Cloth
Iris Cloth

---

Denims

Tickings
Grey Goods

Bleached Goods

---

Worsted Dress Goods

Serges
Panamas

Poplins
Vigereauxs

# WOODWARD, BALDWIN & CO.

**43 and 45 Worth Street, NEW YORK**

Selling Agents for

## SOUTHERN COTTON MILLS

Manufacturing Well Known Brands of

*SHEETINGS* *SHIRTINGS*
*DRILLS* *DUCKS*

For Home and Export

**ALL WEIGHTS AND CONSTRUCTIONS OF PRINT CLOTHS AND FINE CLOTHS IN PLAIN AND FANCY WEAVES**

*OUTING FLANNEL AND ROMPER CLOTH*
*TOWELS AND DIAPER CLOTHS*

Baltimore
St. Louis
St. Joseph

Philadelphia
San Francisco

Boston
Chicago
Shanghai, China

# Tolar, Hart & Holt Mills

**Fayetteville, N. C.**

**Hosiery Yarns 20s to 30s on cones**

## TOLAR & HART

**New York and Philadelphia**

**Selling Agents**

# *Lawrence & Company*

## *Commission Merchants*

**Boston New York Philadelphia**

**Chicago St. Louis San Francisco**

**London England**

---

**Selling Agents for**

***Pacific Mills***

***Merrimack Mfg. Co.***

***Ipswich Mills***

***Boston Mfg. Co., 1901***

***Whittenton Mfg. Co.***

***Ipswich Mills*** *(Middlesex Dept.)*

# J. SPENCER TURNER CO.

**No. 56 Worth Street, NEW YORK CITY**

BOSTON CHICAGO PHILADELPHIA MANCHESTER, ENG. HAMILTON, ONT.

## ARMY, SAIL AND WIDE DUCK

***Sheetings, Drills, Twills, Cotton and Union Crashes, Osnaburgs, Grain Bags, Rope, Twine.***

## COTTON YARNS

Selling Agent of International Cotton Mills, Imperial Cotton Company, Cosmos Cotton Company, Brazos Valley Cotton Mills Bay State Cotton Corporation

**Especial Attention Given to Export Requirements**

ESTABLISHED 1872

## *H. & B. BEER*

***NEW ORLEANS***

HENRY BEER EDGAR H. BRIGHT

J. WILLIAM BARKDULL C. MORGAN ABRAMS

MEMBERS OF

New Orleans Cotton Exchange
New Orleans Future Brokers Association
New York Stock Exchange
New York Cotton Exchange
New York Coffee Exchange
New York Produce Exchange
Chicago Board of Trade

Associate Members of the Liverpool Cotton Association

Private Wires to Principal Points

## HUGHES FAWCETT

IMPORTER AND COMMISSION MERCHANT

**LINEN YARNS**

For Weaving, Knitting and all Purposes

**TURKEY RED YARNS**

For Towel Borders, Towellings and Bleaching Cloth

**Linen Jacquard Harness Twine**

And Every Description of Linen Thread and Twine

**115 Franklin Street, : NEW YORK**

## CARVER-BEAVER YARN CO., Inc.

Successors to A. D. SALKELD & BRO., Inc.

ALL NUMBERS COTTON MERINO **YARNS** ALL COLORS WOOL WORSTED

366 BROADWAY, NEW YORK

## WOODWARD, BALDWIN & CO.

**DRY GOODS**

COMMISSION MERCHANTS

43-45 WORTH STREET, NEW YORK

FRANK M. INMAN C. B. HOWARD PAUL H. ALLEN E. H. INMAN, Special

# INMAN & HOWARD

ATLANTA, GA.

## Cotton Merchants
### and Exporters

*North Georgia and North Alabama Cotton*

*Best Staple Districts*

BRANCHES:

ATHENS, GA. TOCCOA, GA. CHARLOTTE, N. C. MACON, GA.

*SOUTHERN OFFICE:*
*Greenville, S. C.*
*J. L. BUSSEY, Gen. Mgr.*

*HEAD OFFICE*
*310 Chestnut Street*
*PHILADELPHIA, PA.*

# N. P. SLOAN COMPANY

## COTTON MERCHANTS AND EXPORTERS

NORTH GEORGIA COTTON OUR SPECIALTY

AMERICAN BRANCHES:

NEW YORK, N. Y.
UTICA, N. Y.
FALL RIVER, MASS.
NEW BEDFORD, MASS.
BOSTON, MASS.
PROVIDENCE, R. I.
GREENSBORO, N. C.
CHARLOTTE, N. C.
COLUMBIA, S. C.

**ATLANTA, GA.**
AUGUSTA, GA.
LAGRANGE, GA.
SAVANNAH, GA.
MEMPHIS, TENN.
NEW ORLEANS, LA.
FORT WORTH, TEXAS
GALVESTON, TEXAS
BOWIE, TEXAS

FOREIGN BRANCHES:

DEN HAAG, HOLLAND
HAVRE, FRANCE
MILAN, ITALY
BARCELONA, SPAIN
OSAKA, JAPAN
LIVERPOOL, ENG.

**Our own buyers will ship direct from the interior cotton so ordered by spinners or we will make careful selection at the port from our stocks concentrated there for export.**

# Cooper & Griffin
INCORPORATED

W. S. GRIFFIN, Pres. & Mgr.
J. P. COOPER, Vice Pres.
WADE COTHRAN, Treasurer
W. F. JACKSON, Asst. Treas.
J. P. MANLEY, D. E. McCUEN, } Asst. Mgrs.

**COTTON**

OFFICES
GREENVILLE, S. C.
SPARTANBURG, S. C.
GREENWOOD, S. C.
CHARLOTTE, N. C.
SAVANNAH, GA.
TUPELO, MISS.

## Greenville, S. C.

C. S. WEBB, *President.*
*Member New York Cotton Exchange.*

E. M. WELD, *Vice-Pres.*
*Member New York Cotton Exchange.*

L. A. COTHRAN,
*Secretary & Treasurer.*

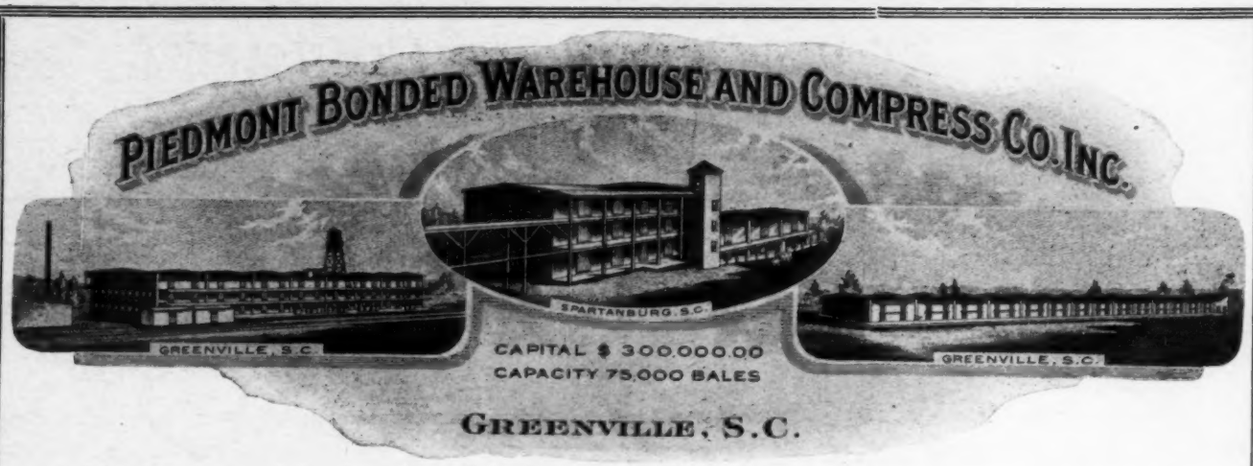
# C. S. WEBB, Inc.
COTTON MERCHANTS
GREENVILLE, S. C.

*CORRESPONDENTS:*

Stephen M. Weld & Co.
New York, and Boston.

Weld & Neville
Houston, Texas, and New York.

Weld & Co.
Liverpool, Eng.




*OVER 500,000 bales of cotton consumed annually within a radius of 50 miles of this Warehouse.*

*Cotton may be re-shipped without additional cost from all points throughout the Cotton States South and West of Atlanta, Ga.*

*Its Receipts are well and favorably known to all Southern, Eastern and Western Banks.*

*Insurance of the best.*

*Rates reasonable.*

*For further informatiou, apply to C. T. Turner, Manager, Greenville, S. C.*

**C. T. TURNER, Manager, Greenville, S. C.**

# THE ROWE-CROMWELL COMPANY

**45, 47, 49 Market St., Amsterdam, N. Y.**

**COTTON CLOTHS and COTTON YARNS**

***Singles and Plys.---Specializing in 2 and 3 Ply,***
***Nos. 10s to 80s Cones, Warps and Skeins.***

***Trimmings For Underwear***

**Mills desiring to be represented in the North on commission basis or otherwise will please communicate.**

Members N. Y. Cotton Exchange
N. O. Cotton Exchange

Est. 1878

Associate Member
Liverpool Cotton Exchange

# *Weil Brothers*

MONTGOMERY, ALA.

Savannah, Ga.
Athens, Ga.
Winder, Ga.
Toccoa, Ga.
Montezuma, Ga.
Augusta, Ga.
Columbus, Ga.
Americus, Ga.
Eufaula, Ala.
Greenville, Ala.

Opelika, Ala.
Demopolis, Ala.
Selma, Ala.
Mobile, Ala.
Dothan, Ala.
Tupelo, Miss.
Amory, Miss.
Aberdeen, Miss.
New Albany, Miss.
Jackson, Tenn.

*New York, 42 Cotton Exchange.*
*New Orleans, La., 13 Hicks Building.*
*Liverpool, Eng., Orleans House.*
*Greenville, S. C. Conyers Building*

# LUCAS & PEGUES

## COTTON

**GREENVILLE, - S. C.**

CODES: SHEPPERSONS 1878-81
MEYERS 39TH-ED.

CABLE ADDRESS: MANGET

# Manget Brothers Company

SUCCESSORS MANGET-BRANNON CO.
Established 1906

## Cotton Merchants and Exporters

## ATLANTA, GA.

OFFICES:

Newnan, Ga.
Atlanta, Ga.
Athens, Ga.
LaGrange, Ga.
Monroe, Ga.
Little Rock, Ark.
Conyers, Ga.
Carrollton, Ga.
Macon, Ga.
Augusta, Ga.

FOLLOW US FOR UNIFORM QUALITIES
EDWARD ROSE CO.

# COTTON WASTE

## Spinners Reduce Your Cost

We specialize in American Card Strips and Combers for the Spinning trade; write or wire us and we will send you samples of grades we can furnish you for regular shipments throughout the year.

A good uniform grade of Strip or Comber will give you cotton results at a decidedly reduced cost.

## Mill Waste Contracts

with our direct selling markets for all grades of cotton mill waste we can pay you highest market values for contracts or spot lots. Write or wire us when you are ready to sell your accumulations.

## Edward Rose Company

**BOSTON, MASS.,**
**184 Summer St.**

**ATLANTA, GEORGIA**
**Healey Building.**

# FRANK B. GRAVES CO.

## 34 Arch Street, Albany, N. Y.

### New York Office, 200 Fifth Ave.

Main Office, Albany, N. Y.

Mills, Cohoes, N. Y. Capacity. 150,000 lbs. weekly

Storehouse, Cohoes, N. Y.

Manufacturers of all kinds of

# GARNETTED STOCK

in Cotton, Wool and Cotton and Wool Mixtures

Dealers in

**Cotton, Knitting and Hosiery Mill Clippings**
**Also Wool, Worsted and Merino Knitting and Hosiery Clippings**
**and Sweater Waste**

*Contractors with mills for their yearly production of Waste.*

Manufacturers of

# Absorbent and Non-Absorbent Cotton

Cable Address: "GRAVES" Albany
Codes. A.B.C. Fifth Division. Liebers 1896. Western Union.

# Hunter Manufacturing & Com. Co.

58-60 Worth St.

NEW YORK CITY U. S. A.

## WORLD-WIDE DISTRIBUTOR OF COTTON FABRICS

## COTTON FABRICS FOR HOME AND EXPORT

**DOMESTIC BRANCH OFFICES**

**Boston Chicago San Francisco**
**Philadelphia St. Louis Los Angeles**
**Baltimore Greensboro**

**FOREIGN BRANCH OFFICES**

**Buenos Aires, Argentine Curacao, D. W. I. Caracas, Venezuela**
**Santiago, Chile Mexico City, Mexico Guatamala City, Guatamala**
**San Juan, Porto Rico Havana, Cuba Barranquilla, Colombia**

# J. H. LANE & CO.

INCORPORATED

NEW YORK

Selling Agents for
Cotton Mill Products

BOSTON CHICAGO

# Cotton and the Bank

IF there is any one group of business interests which, more than another, stands vitally in need at all times of strong, steady, intelligent Banking Service, it is the Cotton group. The fact that we give a type of service that is based on absolute cooperation with the customer makes an account with us produce the maximum of satisfaction. We cordially invite correspondence and interviews looking to the doing of business with you.

Capital
$600,000.00

Surplus & Undivided Profits
$1,302,950.00

Deposits (Sept. 12, 1919)
$23,945,990.00

OFFICERS:

James W. English, Chairman of the Board
John K. Ottley - - - - - - President
Charles I. Ryan - . - - Vice President
James D. Robinson . - Vice President
William T. Perkerson, Cashier Julian Clayton, Asst. Cashier
Stewart McGinty, Asst. Cashier T. W. Townsend Asst. Cashier
Frank M. Berry, Asst. Cashier Edward H. Daly, Asst. Cashier

# Fourth National Bank

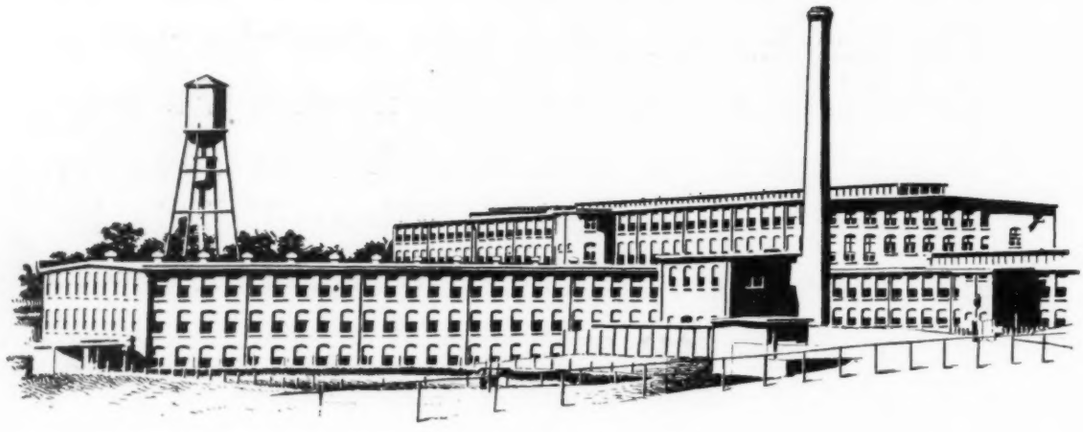
ATLANTA

# WEST POINT UTILIZATION CO.

(Owned by West Point Manufacturing Company)

Capital $2,000,000.00

## WEST POINT, GA.



*One of the Largest PRODUCERS of Reconditioned COTTON WASTE in America*

---

**PURVEYORS OF**

## Uniform SPINNING and UPHOLSTERING STOCKS

---

We suggest that any Cotton Mill looking for an absolutely reliable and steady outlet for its waste communicate with us. All shipments to our plant at Fairfax, Ala.

# The American Processing Company

**Mount Holly, N. C.**

Takes this occasion to announce to the trade that its new and strictly modern plant for mercerizing, gassing and bleaching is expected to be in operation by October 15th, 1919.

Being located in the center of the combed yarn spinning industry of the South it will be prepared to furnish processed yarns in all numbers and of the highest quality.

H. B. ROBIE,
DIRECT REPRESENTATIVE,
No. 346 Broadway,
New York City.

THE RIDDLE COMPANY,
SELLING AGENTS,
Mariner & Merchant Bldg.
Philadelphia.

# International Cotton Products Co.

**Hurt Building**
**ATLANTA, GA.**

**Branches: Charlotte, N. C. Memphis, Tenn. Philadelphia, Pa.**

DEALERS IN

## Cotton, Cotton Waste, Linters

***Ask Us for Our Prices***

# THE ATLANTIC & GULF SHIPPING COMPANY

Cable Address: "Atlantico"

STEAMSHIP AGENTS, SHIP BROKERS AND FORWARDING AGENTS

Codes: Watkins, Scott's, A. B. C. 5th Edition

SAVANNAH, GEORGIA, OFFICE SOU. BK. BLDG.

Goods consigned to us will be properly handled and carefully looked after.

# xchange Your Waste For Our Money

SOUTHEASTERN WASTE CO. COTTON WASTE LINTERS ATLANTA - GEORGIA

Reliable Dealers in Cotton Mill Waste—Trade with us on your next accumulation.

If you use Pickings, Comber, Card Strips, or other irregular spinning stocks, write us for samples and quotations. We can save you money.

**Southeastern Waste Company**

801-4 Silvey Bldg. Atlanta, Ga.

## Responsibility of Leadership

A leader establishes not only his own policies, but often those of the entire industry of which his business is a part.

A leader's hasty judgment, based on insufficient knowledge, may cause widespread disaster.

The National Bank of Commerce in New York has highly organized facilities for gathering from original sources the vital facts of business—both to insure the soundness of its own judgment and to render to its business friends a service of comprehensive usefulness.

**National Bank of Commerce in New York**

Capital, Surplus and Undivided Profits Over Fifty Million Dollars

# Georgia School of Technology

*"A Technical School with a National Reputation"*

COMPLETE courses in Mechanical, Electrical, Civil, Chemical and Textile Engineering, Chemistry, Architecture, Commerce and Industrial Education.

The "A. French Textile School" is completely equipped with a full line of new and modern cotton mill machinery for making various lines of fabrics from the finest goods to heavy ducks and tire fabrics. There are two courses given—a special certificate course and a four-year course leading to a degree.

**For information address K. G. Matheson, President, Atlanta, Georgia**

# STEELE BY-PRODUCTS CO.

INCORPORATED

**DALLAS, TEX.** 305-6 Slaughter Bldg.

**Birmingham, Ala.**

GENERAL OFFICES
WAREHOUSES

**CHICAGO, ILL.** 1013 Hearst Bldg.

## DEALERS

# Cotton By-Products

*Low Grades* *Loose* *Pickings*

*Linters* *Cotton Seed Products*

*Cotton Mill Waste*

*Personal Inspection, Classification and Shipment.* *Mail Us Samples*

*WRITE US FOR TYPES AND PRICES*

# Center Your Finances In

## Quick, Accurate, Helpful Service
**is offered by**

# The Third National Bank

Our field is the entire Sixth Federal Reserve District, from every part of which your mail reaches us over night.

Accepted elsewhere at par, checks drawn on Atlanta banks are the same as New York Exchange.

In close contact with the Federal Reserve Bank and with ample financial connections in the East, we are ready to co-operate with and serve you in every function of modern banking.

Your correspondence and account invited.

**OFFICERS:**
OF THE
**Third National Bank of Atlanta**

| | |
|---|---|
| Frank Hawkins | President |
| Thomas C. Erwin, | Vice-President |
| W. W. Banks, | Vice-President |
| John W. Grant, | Vice-President |
| J. N. Goddard, | Vice-President |
| A. M. Bergstrom, | Cashier |
| W. B. Symmers, | Assistant Cashier |
| A. J. Hansell, | Assistant Cashier |
| W. V. Crowley, | Assistant Cashier |
| Jno. E. Wallace | Auditor |
| W. H. Fitzpatrick, | Mgr. Savgs. Dept. |

**DIRECTORS:**

| | |
|---|---|
| Robt. C. Alston, | Attorney |
| W. W. Banks, | Vice-President |
| A. M. Bergstrom, | Cashier |
| Dr. F. Phinizy Calhoun, | Capitalist |
| M. F. Cole, | Pres., Newnan Cotton Mills, Newnan, Ga. |
| Milton Darkan, | Mgr. South. Dept. Royal Ins. Co. |
| Thos. C. Erwin, | Vice-President |
| John W. Grant, | Capitalist |
| J. N Goddard, | Mgr. Conklin Tin Plate & Metal Co. |
| Frank Hawkins, | President |
| R. T. Jones, | Canton, Ga. |
| Wm. H. Kiser, | Treasurer, M. C. Kiser Co. |
| Isaac Liebman, | Pres. Atlanta Paper Co. |
| Henry W. Miller, | Vice-Pres. So. Railway Co. |
| H. Y. McCord, | Pres. McCord-Stewart Co. |
| Winship Nunnally, | The Nunnally Co. |
| J. Carroll Payne, | Attorney |

# Third National Bank

**Capital, Surplus and Profits, $2,316,000**

# The Center Of The Southeast

3rd

NATIONAL BANK

# Third National Bank

**Resources Over $26,000,000.**

# COMPARATIVE STATEMENTS
— OF —
# THE LOWRY NATIONAL BANK OF ATLANTA

APRIL 6, 1906.

RESOURCES

| | |
|---|---|
| Loans and Discounts | $2,747,582.85 |
| Overdrafts | 4,722.52 |
| Bonds and Stocks | 824,800.00 |
| Real Estate | 29,450.00 |
| Cash and due from Banks and Bankers | 821,329.75 |
| | $4,427,885.12 |

LIABILITIES.

| | |
|---|---|
| Capital Stock | $ 500,000.00 |
| Surplus and Profits | 546,102.82 |
| Circulation | 492,800.00 |
| Deposits | 2,888,982.30 |
| | $4,427,885.12 |

AUGUST 18, 1919.

RESOURCES

| | |
|---|---|
| Loans and Discounts | $10,727,351.09 |
| Overdrafts | 697.16 |
| Bonds and Stocks | 2,369,620.00 |
| Real Estate | 1,155.00 |
| Cash and due from Banks and Bankers | 5,967,580.48 |
| Stock in Federal Reserve Bank | 60,000.00 |
| Due from U. S. Treasurer | 50,000.00 |
| Advances to Customers Account Liberty Bonds | 17,261.55 |
| Customers' Liability—Acceptances | 210,000.00 |
| | $19,403,665.28 |

LIABILITIES.

| | |
|---|---|
| Capital Stock | $ 1,000,000.00 |
| Surplus and Profits | 1,547,617.69 |
| Circulation | 999,997.50 |
| Deposits | 15,446,050.09 |
| Bills Payable | 200,000.00 |
| Acceptances for Customers | 210,000.00 |
| | $19,403,665.28 |

THE LOWRY NATIONAL BANK was established in 1861 by the late Col. Robt. J. Lowry. It has gained each day in strength and scope and in the confidence of the public.

Throughout this steady growth, covering more than half a century, its individuality has been preserved, although the tendency to consolidation has been general throughout the country.

In these times of reconstruction and big business an alliance with a substantial institution such as the Lowry National Bank is helpful and desirable. Correspondence invited.

## THE LOWRY NATIONAL BANK OF ATLANTA, GA.

**Pryor and Edgewood.**

*1865—The Oldest National Bank in the Cotton States—1919*

# The Atlanta National Bank
## —and—
# The Banking Center of The Southeast

Atlanta, the banking center of the Southeast, has—

Strong, sound, and progressive banks,

Fast mail and ample railroad service,

A Federal Reserve Bank with its convenient facilities,

Bank clearings the largest of any city in the Southeast.

Checks drawn on Atlanta banks are accepted at par—the same as N. Y. exchange.

CONCENTRATE your financial business where AMPLE FACILITIES and PROMPT SERVICE are always at your disposal.

**Accounts and correspondence solicited.**

*OFFICERS:*

Robert F. Maddox, President

| VICE-PRESIDENTS | ASSISTANT CASHIERS |
|---|---|
| Thos. J. Peeples | Jas. F. Alexander |
| Geo. R. Donovan | R. B. Cunningham |
| James S. Floyd | D. B. DeSaussure |
| Frank E. Block | J. D. Leitner |

J. S. KENNEDY, Cashier

## The Atlanta National Bank
Resources Over $34,000,000

IN THE HEART OF ATLANTA-THE HEART OF THE SOUTH

DIVERSIFIED FINANCIAL SERVICE
ATLANTA TRUST CO.

# Atlanta Trust Company

## ATLANTA, GA.

## Capital $1,000,000

**Member Federal Reserve System**

**Banking Department**

Accepts Accounts of Banks, Firms, Corporations, and Individuals.
Extends Credits.
Issues Interest-Bearing Certificates of Deposit.
Issues Travelers' Checks. Deals in Trade and Bank Acceptances.

**Savings Department**

Pays 4% Interest Compounded Semi-annually.

**Farm Loan Department**

Farm Loans Negotiated at Reasonable Interest Rates; Prompt Action; No Delays in Closing.

**Trust Department**

Acts as Trustee under Corporate Mortgages.
Executor, Administrator, Testamentary Trustee.
Guardian of Estates of Infants.
Committee of Property of Incompetents.
Depositary and Agent of Voting Trustees—Holds Securities or Cash Under Escrow Agreements.
Custodian of Securities and Financial Agent for Individuals and Corporations.
Depositary for Corporations Organizing, Reorganizing or Established.
Fiscal and Disbursing Agent—Registrar and Transfer Agent, Receiver, Assignee and Liquidating Agent.

**November 1st, the above building, recently acquired for our future home, now known as the Empire Building, will be occupied by the Atlanta Trust Company, at which time the name will be changed to Atlanta Trust Company Building.**

**We possess facilities for any branch of financial Service. Our slogan: "Diversified Financial Service." If contemplating a change in your banking connections, or a new or enlarged financial undertaking, our Service is at your disposal.**

### OFFICERS

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**GEORGE S. LOWNDES, Vice-President**
**TURNER C. TRIPPE, Treasurer.**
**JNO. B. WHEAT, Sec'y and Trust Officer**
**H. O. REEVE, Mgr. Farm Loan Dept.**
**JACK J. SPALDING, Counsel**
**LEROY GREGORY, Mgr. Credit Dept.**

### TRUSTEES

**Arnold Broyles**
Clerk Superior Court, Fulton County.

**Charles H. Black**
President Atlanta Real Estate Board.

**Dr. F. Phinizy Calhoun**

**M. L. Cannon**
Manufacturer, Kannapolis, N. C.

**Hamilton Douglas, Jr.**
Douglas & Douglas, Attys.

**Frank S. Etheridge**
President

**A. J. Evans**
President Citizens Bank, Fort Valley, Ga.

**Samuel N. Evins**
Evins & Moore, Attorneys.

**James S. Floyd**
Vice-Pres. Atlanta Nat. Bank.

**Robert L. Foreman**
State Agent Mutual Benefit Life Insurance Co.

**J. M. B. Hoxsey**
Vice-Pres. Southern Bell Tel. & Tel. Co.

**R. T. Jones**
Banker, Canton, Ga.

**Mitchell C. King**
Cotton Oil Broker.

**George H. Lanier**
Manufacturer, West Point, Ga.

**Charles B. Lewis**
Pres. Fourth National Bank, Macon, Ga.

**W. J. Lowenstein**
President Norris, Inc.

**George S. Lowndes**
Vice-President.

**John Morris**
The Keely Co., Dept. Store.

**Billups Phinizy**
Pres. Southern Mutual Ins. Co., Athens, Ga

**J. Russell Porter**
Pres. Porter Fertilizer Co.

**W. P. Wallace**
Banker, Rutledge, Ga.

**G. P. Willis**
Capitalist.

**Exempt From All Federal Income Taxes Under Present Income Tax Laws**

# Municipal Bonds

**Constitute the Safest Form of Investment.**

On our list at all times you can find Municipal Bonds netting from 4¼% to 5% on the investment.

Ask us to submit for your consideration a list of our offerings in securities of this class.

We welcome inquiries and take special interest in answering questions asked by small investors.

**Our Service is Open to You.**

**Stock and Bond Department**

# Trust Company of Georgia

Under Management of

W. C. WARDLAW J. J. GOODRUM, JR.

# COTTON—WOOL—GRAIN

are three commodities in which New England is largely interested. Business resulting from the handling of these commodities is solicited.

## THE FIRST NATIONAL BANK OF BOSTON

**CAPITAL, $7,500,000 SURPLUS AND PROFITS, $20,000,000**

**DEPOSITS, $179,000,000**

## Commercial Banking for the Textile Industry

The prime functions of the Textile Banking Company, Inc.—which acts, *exclusively*, as commercial banker, or factor, for interests in the textile field—are to foster and facilitate sound financing among mills, converters, and other merchants in the industry, and to provide the requisite resources for the expansion of its clients' businesses.

The broad services of our Industrial Department will prove of much value in the operation and expansion of American textile interests both here and abroad.

We shall be pleased to discuss with you your particular problem relative to textile financing.

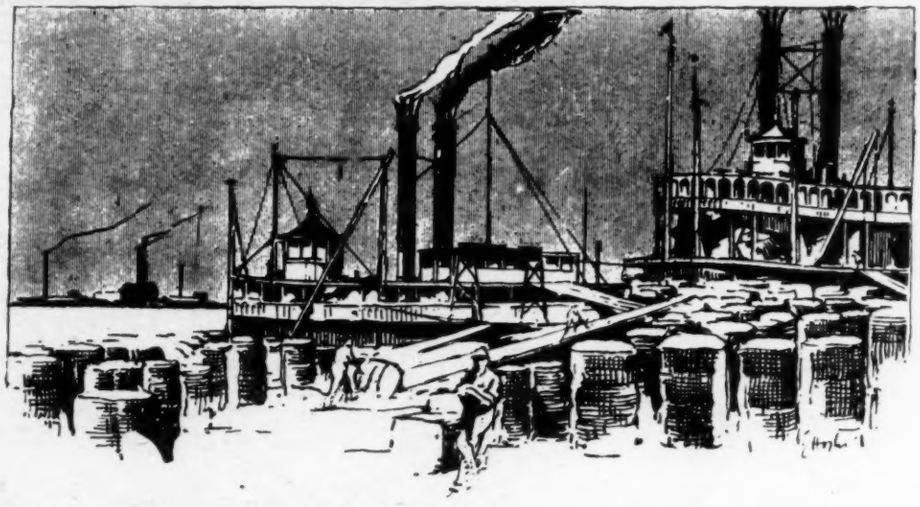
### Textile Banking Company, Inc.

50 Union Square

(4th Avenue *and* 17th Street, New York)

Capital $2,000,000 Surplus $500,000

*Inaugurated by the* GUARANTY TRUST COMPANY OF NEW YORK
*and the* LIBERTY NATIONAL BANK OF NEW YORK



# AMERICA *must clothe the world*

The world's needs of cotton, raw and manufactured, are greater today than ever.

America is the principal source of supply, growing more than half of the world's annual crop.

This year's cotton yield is smaller than the average. Prices rule high and marketing costs have increased. Financing shipments under these conditions requires the closest banking co-operation.

The National Shawmut Bank of Boston has always had an important part in the movement of the cotton crop. Our Foreign Department finance shipments, export as well as import, from the cotton fields of the finance shipments, export as well as import, from the cotton fields of the South or far-off Egypt to the mills of New England or elsewhere at home and abroad.

Shawmut Service offers a distinct advantage to cotton shippers and manufacturers. It meets every demand to facilitate the handling of the cotton crop. It is distinguished for its completeness and thorough practicality.

## THE NATIONAL SHAWMUT BANK of Boston

| | |
|---|---|
| CAPITAL STOCK | $10,000,000 |
| SURPLUS AND UNDIVIDED PROFITS | $10,000,000 |
| RESOURCES OVER | $200,000,000 |

*Correspondence solicited. Our booklets "Acceptances" and "The Webb Law" explain methods of financing and developing foreign trade. Write for copies.*

Security First

Selected Investment Securities

# GEORGIA MUNICIPAL BONDS

Exempt from Federal Income and State, County and City Taxes

Bridge
Road
Courthouse
Sewer
School
Water Works

**Netting from 4.75% to 5%**

Send for Descriptive Circulars

## THE ROBINSON-HUMPHREY COMPANY

Atlanta, Georgia

Third National Bank Bldg. Atlanta, Georgia

Telephones Ivy 316 and 317

# THE AMERICAN AUDIT COMPANY

100 BROADWAY, NEW YORK CITY

F. W. LAFRENTZ, C. P. A., President.

H. M. RICE, C. P. A., Vice Pres. A. F. LAFRENTZ, Secy. & Treas.

BRANCHES:

New York, Chicago, Boston, Scranton
Richmond, Baltimore, New Orleans, Philadelphia
Washington, D. C., Milwaukee, San Francisco, London, E. C.
Atlanta

Our Reports of Audit and Our Certificates of Condition and Operations, Are Known and Have Weight in the Financial Centers of the World

ATLANTA BRANCH:

1013 Fourth National Bank Building, Atlanta, Ga.

C. B. BIDWELL, C. P. A., Resident Vice President.

# Announcement

We announce the organization of The Mill Supply Company with offices and warehouse at Greenville, South Carolina.

We carry a complete line of textile and general mill supplies with large stocks in our warehouse, enabling us to give the mills prompt shipment on all orders.

Our organization is composed of men, having many years of experience supplying the needs of the Southern textile mills. We are in a position to not only fill your orders promptly, but to have our representatives investigate the conditions in your mill, co-operate with you in solving your problems and recommending the equipment and supplies best suited to your particular requirements.

We invite the opportunity of demonstrating our service to you.

## The Mill Supply Company

Greenville, S. C.

PAUL E. CHALIFOUX, President. RHODES BOYKIN, Vice-Pres't & Gen. Mgr. R. N. HAWKINS, Sec'y & Treas.

## KIRKPATRICK LUMBER & TIMBER CO.

MANUFACTURERS AND WHOLESALE DEALERS

1912-1917 AMERICAN TRUST BUILDING

New England Office: Salem, Mass.

**BIRMINGHAM, ALA.**

LONG AND SHORT LEAF YELLOW PINE—HARDWOODS

Structural Timbers, Railroad Material and General Yard Stock.
Oak and Maple Flooring—Red Cedar Shingles.

## F. L. VANDRIESSCHE

**Expert Cotton Classer and Controller.**
**Supervisor and Controller (for Shippers only).**
**Cotton, Linters, Cotton Waste, Sweepings.**

**GHENT, Antwerp (Belgium)**

Head Office: GHENT, Blvd. Charles de Kerchove 41.
Cable Address: "Gradecot."
Reference: Marcel Baudoux & Co., Galveston, Texas.

# Southern Textile Machinery Co.

**110-112 East McBee Ave.** **Greenville, S. C.**

DEALERS IN

**Cotton Mill Machinery and Supplies**

**Electrical Apparatus Steam Plants**

**Complete Equipments Bought and Sold**

# S. S. & F. Co., Inc.

**CHARLOTTE, N. C.**

**The S. stands for Southern, the S. & F. for Safety First**

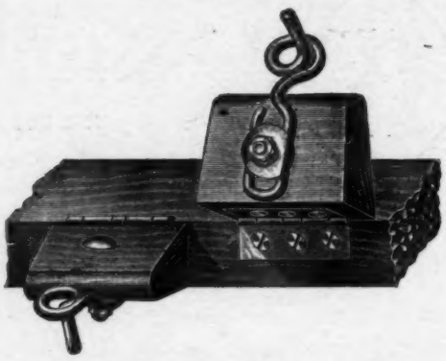
The only Flyer Presser Manufacturers in the South. Does your machinery need OVERHAULING? Does your Steel Rolls, Flyers, Spindles, etc., need REPAIRING? Are you NEEDING Flyers, Flyer PRESSERS, Rings of any kind, Guide Wires or any other supplies? If so, this is YOUR BUSINESS — OUR BUSINESS IS SUPPLYING these needs.

## Southern Spindle & Flyer Co., Inc.

CHARLOTTE, N. C.

W. H. MONTY, - Pres. and Treas.
W. H. HUTCHINS, Vice-Pres. and Sec.

## The Palmer Adjustable Thread Guide



**For Ring Spinning and Twisting Frames**

**Easily adjusted.**

**Extreme accuracy and permanence of setting.**

**Cheapest of them all.**

**Mail guide-block for free sample.**

**Patented and manufactured by**

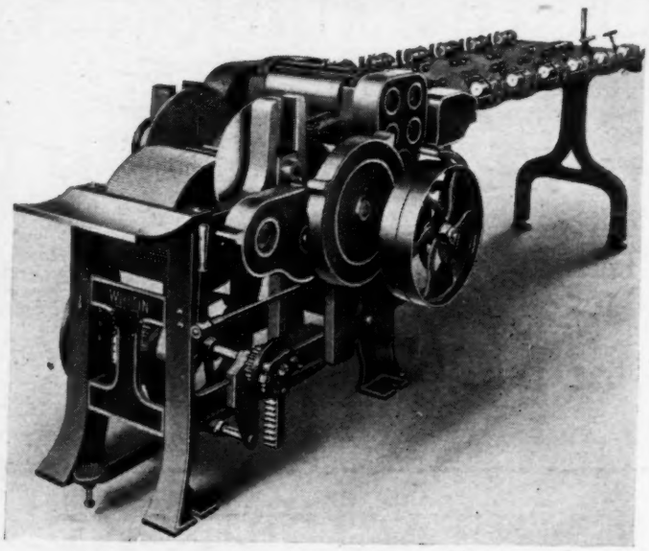
## THE I. E. PALMER COMPANY

**Middletown, - - - Connecticut**

# WHITIN MACHINE WORKS

ESTABLISHED 1831

TEXTILE MACHINERY



Sliver Lap Machine

Manufacturers of

COMBING MACHINERY

Comprising

Sliver Lap Machines

Ribbon Lap Machines

Combing Machines

containing

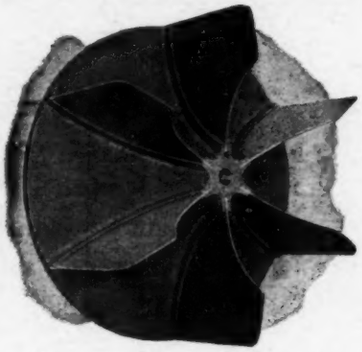
All the Latest Improvements.

*Send for*
*Descriptive Catalogs.*

MAIN OFFICE AND WORKS

WHITINSVILLE, MASS., U.S.A.

SOUTHERN OFFICE CHARLOTTE N.C.



# Here's the Fan Wheel

## That Has Made These Reversible Fans So Universally Successful in Cotton Mills

This fan wheel is the secret of the success of our reversible fans for conveying Cotton, Wool, Rags and Stringy Material of any kind.

This fan wheel is constructed with a cone-shape back of cast iron with sheet steel blades cast solid. Note the short overhang, which makes the fan run smoothly without vibration. This wheel offers less resistance to material passing through than any other wheel. It handles long, stringy material just as good as short material or lint.

**And it's reversible.**

The fan is built solid and runs without a tremor at maximum speed. No buckling of suction at high speed. No rivets to work loose. Universal adjustment of bearings, not simply up and down.

Made in any size, from 30 to 60 inch.

Folder R. F. explains fully. Ask for it today. Our catalogs No. 65 and 67 show complete line of fans and blowers for every class of work.

**We have a large stock of repair parts which can be shipped at a moment's notice.**

BUILT RIGHT RUN RIGHT

# The New York Blower Co.

513 Transportation Bldg., CHICAGO, ILL.

**Works: BUCYRUS, OHIO.**

Leader-News Bldg. Cleveland, O. 502 Plymouth Bldg. Minneapolis, Minn. 333 B. F. Jones Bldg. Pittsburgh, Pa. 629 Nicholas Bldg. Toledo, Ohio. S. W. Life Bldg. Dallas, Tex.

E. C. Atkins Co., Memphis, Atlanta and Indianapolis, Ind.

370 Central Ave., East Orange, N. J.

# Nickel-Plated Drop Wires

— IN ANY SIZE OR STYLE AT ONLY —

**25c Per Thousand**

above the price for regular finish. Our drop-wires are made of the best grade steel wire.

---

## STEEL HEDDLE MANUFACTURING CO.

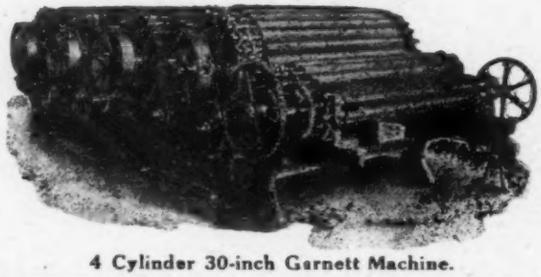
Greenville : Philadelphia : Providence

**Southern Office, Hampton Smith, Mgr., 111 Washington Street, Greenville, S. C.**

## SMITH & FURBUSH MACHINE CO.

**PHILADELPHIA, PA.**

A Garnett Machine of this size will reduce to fibre hard twisted thread waste without materially shortening the staple.



**4 Cylinder 30-inch Garnett Machine.**

We also build smaller machines for working softer wastes. Send us a small sample of your stock and ask for Circular S-85.

## SPOOLS

Let us submit prices and samples on WARPER and TWISTER SPOOLS. Plain wooden head and metal shield. A list of Southern Mills using spools given on request.

**Greenville Spool & Mfg. Company**

**Greenville, S. C.**

# MOSSBERG

## STEEL BEAMS AND SPOOLS

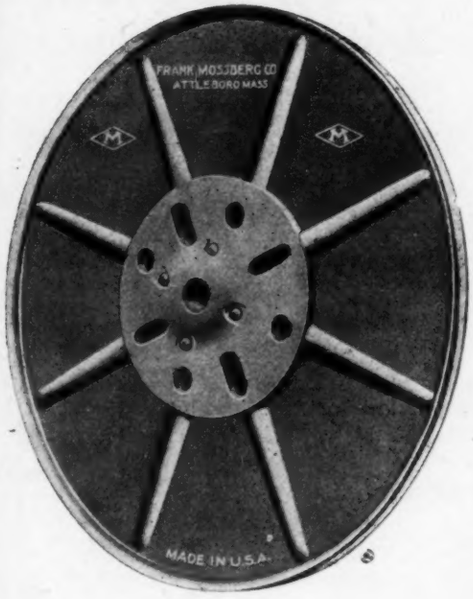
It's good business to buy Pressed Steel Beams, Reels and Spools, because the cost of repairs and replacements makes wood construction the most expensive. Steel is stronger and lighter than wood or cast iron.

No more split, cracked, splintered, warped or chipped beam heads or reels, when you use

**MOSSBERG**
**PRESSED STEEL CONSTRUCTION**

Because of the obvious superiority, mills all over the country are standardizing on Pressed Steel, saving money and the time wasted by frequent purchasing.

Send for catalog of Standard Pressed Steel Beams, Reels and Spools which take care of practically all winding and reeling requirements.




BY INVITATION MEMBER OF

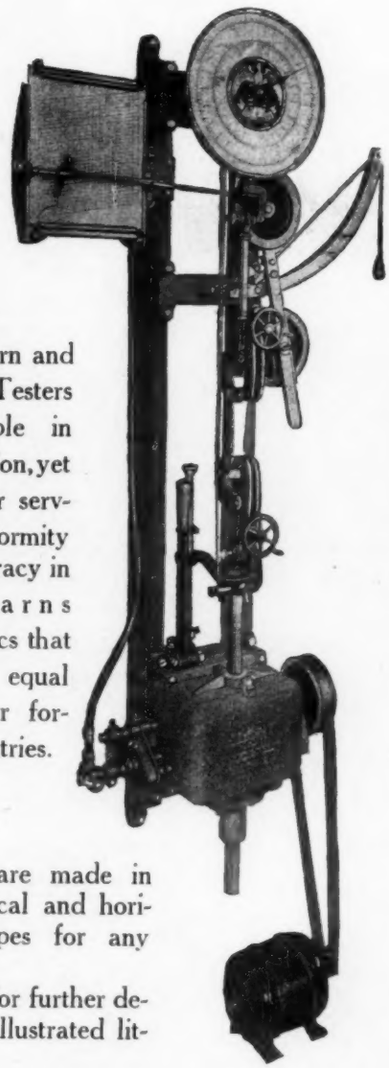
NEW YORK U.S.A.

FRANK MOSSBERG CO.
ATTLEBORO, MASS., U.S.A.



# SCOTT TESTERS

THE human influence is entirely eliminated in Scott Testers. The machine is operated by mechanical power and so designed as to test automatically, quickly and accurately.



Scott Yarn and Cloth Testers are simple in construction, yet they offer service, uniformity and accuracy in testing yarns and fabrics that have no equal in this or foreign countries.

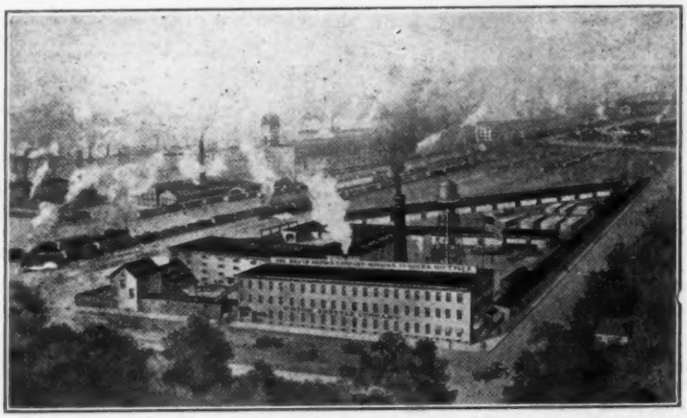
They are made in both vertical and horizontal types for any capacity.

Write for further details and illustrated literature.

HENRY L. SCOTT & CO.
PROVIDENCE, R. I.

**The David Brown Company**

**Factories Lawrence, Mass. U. S. A.**



**High Grade Bobbins, Spools, Shuttles and Skewers.**

**Facilities are the Best.**

**Correspondence Solicited.**

## Maximum Production Depends Upon Pure Water

Cool, pure drinking water is an absolute necessity to maximum production.

Nothing is so necessary to the health and contentment of your employees as cold, pure water—and nothing so necessary to efficiency and production as the employes health and contentment.

No better fountain can be secured than the PURO—it's more sanitary—the only fountain that presents placing the lips to the bubbler.

Substantially constructed, no parts to get out of order. Faucet prevents water from spurting from the bubbler.

Don't consider this merely a welfare proposition, but an investment that will pay dividends in increased efficiency and more production. Write today for catalog and full information.

**PURO SANITARY DRINKING FOUNTAIN CO.**
**102 Main St. Haydenville, Mass.**
*Southern Agent, E. S. Player Greenville, S. C.*

**PURO**
**SANITARY DRINKING FOUNTAIN**

## AMERICAN SUPPLY COMPANY

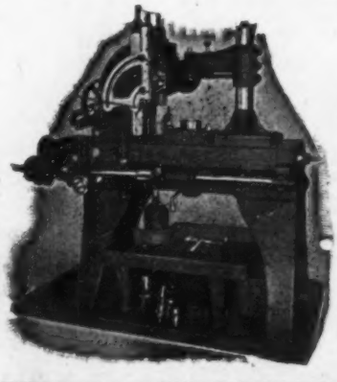
**PROVIDENCE, R. I.**

MANUFACTURERS OF

Loom Harness,
Weaving Reeds,
Oak Tanned Leather
Belting, Strapping,
Etc.

**We make a specialty of Harness for Warp Drawing Machines**

NOTE—No orders too large for our capacity. None too small to receive careful attention.

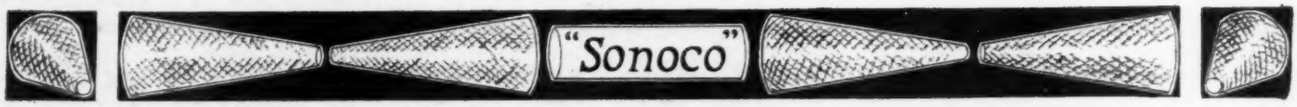


Full Automatic, Semi-Automatic and Hand Operated

## Gear Cutting Machines

***Especially adapted for use in Cotton Mills Hundreds now in use. Send for Special Circulars.***

**The D. E. Whiton Machine Co.,**
**NEW LONDON, CONN.**




## *It shows on the Cost Sheet!*

Smooth-winding, Dependable

# "Sonoco" Cones

Cut expense items due to "Hanging," "Slipping," etc.

By confining our efforts exclusively and conscientiously to the making of strong, perfect cones, we cut "Waste Yarn" and many Labor-Hours from the winding room Cost Sheet.

**We want to extend our usefulness to your mill!**

## Southern Novelty Co., M'f'r's., Hartsville, S. C.

# HOLYOKE

## Prevents Damage to Material

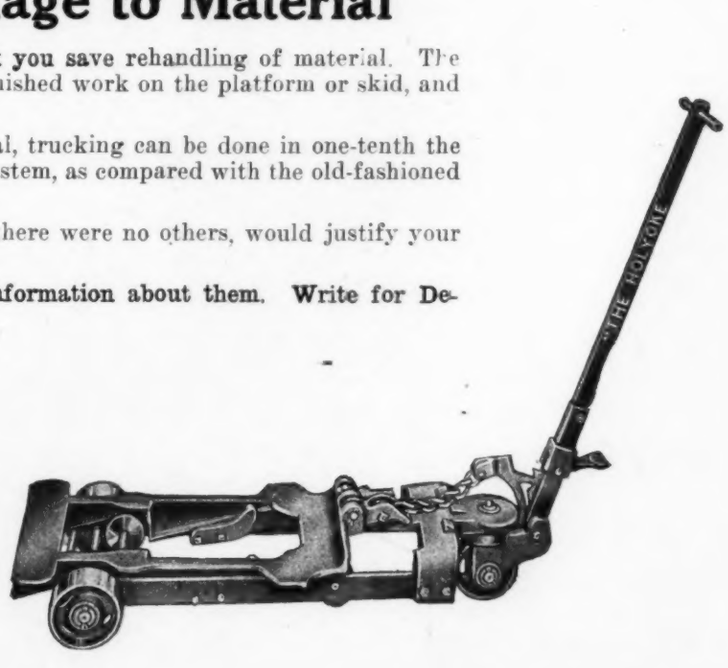
With the "Holyoke" **Transfer Truck you save** rehandling of material. The machine operator simply places the finished work on the platform or skid, and it is ready to be moved.

Besides preventing damage to material, trucking can be done in one-tenth the time with the "Holyoke" Trucking System, as compared with the old-fashioned method.

These two advantages alone, even if there were no others, would justify your installing "Holyoke" Trucks.

**Let us furnish you with complete information about them. Write for Descriptive Bulletin AM-1.**

*The "Holyoke" Transfer Truck is made of metal throughout. The material used is of the highest quality. All wheels are fitted with Hyatt Roller Bearings, mounted on heat-treated axles. Model RL, shown here, is made in seven sizes, to handle loads from 2500 to 4000 pounds.*




**Holyoke Truck Company**
**119 Race Street**
**Holyoke, Mass., U. S. A.**

Photograph of

# Our Celebrated Coaster Slide

in Action

WE are the originators and patentees of the Wave Slide, patent No. 1239848. All persons are warned against purchasing other slides violating our patent. Write for our illustrated catalogue.

## American Playground Device Company

AWARDED GOLD MEDAL PANAMA CALIFORNIA EXPOSITION 1915.

ANDERSON, IND.

Manufacturers of

PARK AND PLAYGROUND EQUIPMENT

PORCH AND LAWN FURNITURE

AGRICULTURAL, BABY CARRIAGE AND GO-CART WHEELS, STEEL AND RUBBER TIRE

## Summer or Winter FOUNTAIN

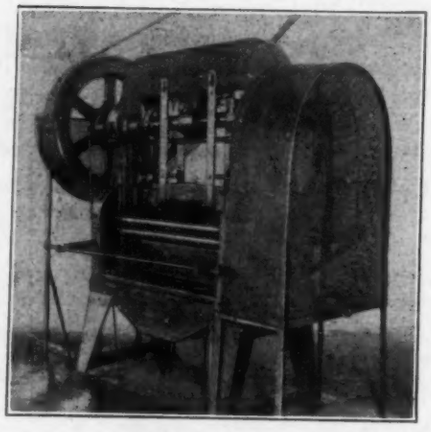
This barrel fountain made from 1⅝" thick selected oak with a heavy galvanized iron pipe coil and waste, represents a maximum life as the question of rust, common to all iron fountains, is eliminated. It is strongly constructed to withstand hard service, and will make for greater efficiency among your employees than any other item you can install.

*Write Today for Prices.*

## RUNDLE-SPENCE MANUFACTURING CO.

Office and Store 63-65 Second St. MILWAUKEE Show Rooms 67 Second St.

## Beckley Perforating Co. 14 North Ave. Garwood, N. J.



STEEL surfacing for sand rolls, Drying machines and ovens, Copper and brass centrifugal liners, Sheet steel for machinery guards, Steel vats, Kettles and Tanks, electrically welded.

SOUTHERN AGENTS

WILSON COMPANY, GREENVILLE, S. C.

# We Must Have a Homogeneous People

## *The Postal Zone Law Is a Menace to Our Nation*

By CONGRESSMAN FRANK W. MONDELL, of Montana

**Floor Leader of the Majority Party in Congress**

I *AM opposed to the zone system* for the dissemination of news, ideas and information because I am of the opinion that the establishment and maintenance of such a policy would, in the long run, have a most unfortunate, harmful and regrettable effect upon the American people.

If we are to maintain peace, order and justice under the institutions of free Government, within our borders, we must have a homogeneous people guided by the same principles and inspired by the same ideals. This condition essential to the maintenance of free government can only be secured by the widest possible circulation of these instruments and instrumentalities which inform, mould and affect public opinion.

Any policy which tends to make us provincial or parochial as a people; which tends to build up zones of influence and information, is a policy not only harmful but one that long continued and widely extended would prove fatal to free institutions. On the other hand, a policy which makes equally available to the people in all parts of the country the journals and magazines which convey information, carry current argument, analysis and entertainment, tends to maintain those conditions essential to our institutions.

Those whose views are arguments for the zone system are based primarily or largely on its effect, or alleged effect, on postal revenues, or the profits of the publishing business, fail utterly to grasp or realize the larger and infinitely more important aspects of postal systems as they effect the national life. If it be a fact that the flat postal rate on newspapers and magazines has been unduly low, that is a matter for consideration by the Post Office Committee, having in view the traditional policy of the American people. The fact that some people have been able to make a considerable amount of money in the newspaper and magazine business is, of course, one of the matters that a committee would consider in this connection, but it is by no means conclusive that a policy is wrong because some people have been able to make money under it—many having the same opportunities and privileges failed utterly.

The demand for the establishment and maintenance of a zone system is particularly lame and illogical when it is made by those who are urging a flat rate of one cent on letters. Such people to be logical should insist upon a zone rate for letters as well as papers and periodicals. Neither is the argument for a zone system strengthened by exaggerated statements of losses to the postal revenues under a flat rate. Undoubtedly the former flat rate did not wholly reimburse the postal revenues but the most superficial examination of the matter renders ridiculous exaggerated statements of alleged losses. To the argument that publications enjoying the second-class rates are devoted more or less to advertisement, I offer the suggestion that a national dissemination of attractive advertisements is not without its educational benefits.

I have neither urged nor considered this as a party question. It involves a national principle affecting every man, woman and child in the Republic, and has never been considered in a partisan way by anyone so far as I know. I urged this repeal before the previous Democratic Congress, as I shall before the present Republican Congress—not on party or partisan grounds, but on the broad platform that such a policy tends to circumscribe and provincialize our national life to our great haven as a people.

(Signed) F. W. MONDELL.

# Odd, Isn't It

—that some people think of advertising as a means of benefiting only the seller, when its basic function *must be* to render a necessary service to the buyer, else it could not exist. Merchandise lives or dies as it does or does not meet a human need. Advertising is subject to the same law of service. The real measure of its value is what it *gives*, not what it gets.

In the light of these truths, the marvelous growth of advertising in itself, is an impressive demonstration of its essential character in our economic system.

But you are not interested in *all* advertising any more than you are in all merchandise. That is one big reason why you have a highly specialized Business Paper in your field such as the one carrying this advertisement. It was born of your needs, not of any man's desire to be a publisher.

## How It Works for You

What it does for you and your field editorially is self evident, but its *a*ditorial service is just as vital. Instead of a buyer having to depend upon gossip, hearsay and driblets of information from this or that source, he gets it all between two covers.

Timely, authoritive, comprehensive, statements about needed materials pass in review as the advertising pages are turned. Confident judgments can be formed, and intelligent decisions made.

Yet advertising is NOT an *added* expense, but an improved distributive process, which takes the place of slower, more costly and less efficient methods.

That is why it pays to *read* advertising even more than it pays to advertise. Especially if you read it in papers which have met the exacting requirements of membership in The Associated Business Papers, Inc., for one of its standards of practice requires that a paper must *decline any advertisement which has a tendency to mislead or which does not conform to business integrity.*

**You are invited to consult us freely about Business Papers or Business Paper advertising**

**LIST OF MEMBERS**

*Each has subscribed to and is maintaining the highest standards of practice in their editorial and advertising service.*

**Advertising and Selling**
**American Architect**
**American Blacksmith**
**American Exporter**
**American Funeral Director**
**American Hatter**
**American Machinist**
**American Paint Journal**
**American Paint and Oil Dealer**
**American Printer**
**American School Board Journal**
Architectural Record
**Automobile Dealer and Repairer**
**Automobile Journal**
**Automotive Industries**
Bakers Weekly
**Boot and Shoe Recorder**
**Brick and Clay Record**
**Buildings and Building Management**
**Bulletin of Pharmacy**
**Canadian Grocer**
**Canadian Railway and Marine World**
Cake and Ice Cream.
**Chemical & Metallurgical Eng'g**
**Clothier and Furnisher**
**Coal Age**
**Coal Trade Journal**
COTTON
**Concrete**
**Daily Iron Trade & Metal Market Report**
**Domestic Engineering**
**Dry Goods Economist**
**Drygoodsman**
**Dry Goods Reporter**
Electric Railway Journal
**Electrical Merchandising**
**Electrical Record**
**Electrical Review**
**Electrical World**
**Embalmer's Monthly**
**Engineering World**
**Engineering and Mining Journal**
**Engineering News-Record**
**Factory**
**Farm Machinery—Farm Power**
**Foundry (The)**
**Furniture Journal**
**Furniture Manufacturer and Artisan**
**Furniture Merchant's Trade Journal**
**Gas Age**
**Gas Record**
**Grand Rapids Furniture Record**

**LIST OF MEMBERS**
*(Continued)*

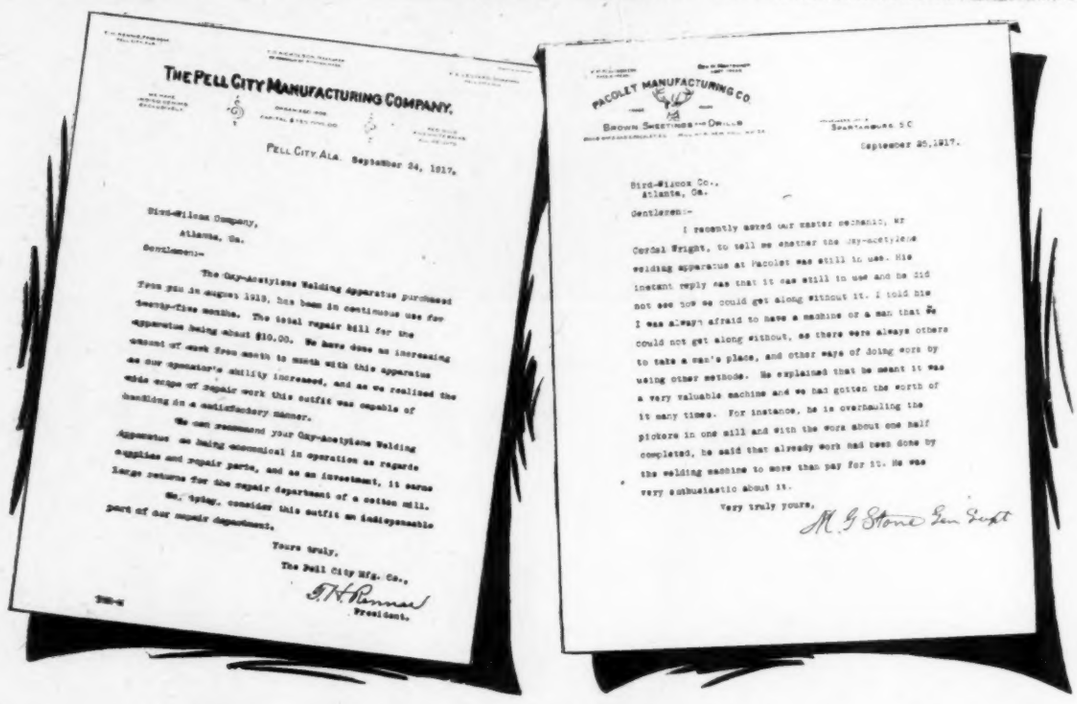
**Haberdasher**
**Hardware Age**
**Heating and Ventilating Magazine**
**Hide and Leather**
**Hotel Monthly**
**Illustrated Milliner**
**Implement and Tractor Age**
**Industrial Arts Magazine**
**Inland Printer**
**Iron Age**
**Iron Trade Review**
**Lumber**
**Lumber Trade Journal**
**Lumber World Review**
**Manufacturers' Record**
**Manufacturing Jeweler**
**Marine Engineering**
**Marine Review**
**Metal Worker, Plumber and Steam Fitter**
**Mining and Scientific Press**
**Millinery Trade Review**
**Mill Supplies**
**Modern Hospital**
**Motor Age**
**Motorcycle and Bicycle Illustrated**
**Motor Truck**
**Motor World**
**National Builder**
**National Druggist**
**National Petroleum News**
**Nautical Gazette**
**Northwestern Druggist**
**Nugent's, The Garment Weekly**
**Power**
**Power Boating**
**Power Plant Engineering**
**Price Current—Grain Reporter**
**Railway Age**
**Railway Electrical Engineer**
**Railway Maintenance Engineer**
**Railway Mechanical Engineer**
**Railway Signal Engineer**
**Retail Lumberman**
**Rubber Age**
**Shoe Findings**
**Shoe and Leather Reporter**
**Shoe Retailer**
**Southern Engineer**
**Southern Hardware and Implement Journal**
**Sporting Goods Dealer**
**Starchroom Laundry Journal**
**Tea and Coffee Trade Journal**
**Textile World Journal**
**Timberman**
**Transfer and Storage**
**Twin City Commercial Bulletin**
**Woodworker**

## THE ASSOCIATED BUSINESS PAPERS, Inc.

JESSE H. NEAL, EXECUTIVE SECRETARY.

**HEADQUARTERS** **220 West 42nd Street** **NEW YORK CITY**

# B-W. WELDING APPARATUS



THE PELL CITY MANUFACTURING COMPANY.

PELL CITY ALA. September 24, 1917.

Bird-Wilcox Company,
Atlanta, Ga.

Gentlemen:-

The Oxy-Acetylene Welding Apparatus purchased from you in August 1913, has been in continuous use for twenty-five months. The total repair bill for the apparatus being about $10.00. We have done an increasing amount of work from month to month with this apparatus as our operator's ability increased, and as we realized the wide scope of repair work this outfit was capable of handling in a satisfactory manner.

We can recommend your Oxy-Acetylene Welding Apparatus as being economical in operation as regards supplies and repair parts, and as an investment, it earns large returns for the repair department of a cotton mill. We, today, consider this outfit an indispensable part of our repair department.

Yours truly,
The Pell City Mfg. Co.,
President.

PACOLET MANUFACTURING CO.

Brown Sheetings and Drills

Spartanburg S C

September 25,1917.

Bird-Wilcox Co.,
Atlanta, Ga.

Gentlemen:-

I recently asked our master mechanic, Mr Cordal Wright, to tell me whether the Oxy-acetylene welding apparatus at Pacolet was still in use. His instant reply was that it was still in use and he did not see how we could get along without it. I told him I was always afraid to have a machine or a man that we could not get along without, as there were always others to take a man's place, and other ways of doing work by using other methods. He explained that he meant it was a very valuable machine and we had gotten the worth of it many times. For instance, he is overhauling the pickers in one mill and with the work about one half completed, he said that already work had been done by the welding machine to more than pay for it. He was very enthusiastic about it.

Very truly yours,
M. J. Stone Gen Supt

# Over 300 Cotton Mills Are Saving Money with B.W. Welding Apparatus

More and more mills are realizing the uselessness of spending their good money for new machines and parts, when the broken parts can be made as good as new by welding. For example, a cost sheet from one mill covering a period of one year is as follows:

| Department | Value of Parts if Purchased New | Total cost of welding, including supplies, labor, etc. | Actual saving Over New Parts |
|---|---|---|---|
| Weaving Room | $1,835.43 | $864.33 | $971.10 |
| Card and Waste Room | 305.35 | | |
| Spinning and Spooling Room | 99..0 | | |
| Slashing Dept. | 53.75 | 576.22 | 495.58 |
| Cloth Room | 45.15 | | |
| Fachine Shop | 502.50 | | |
| Miscellaneous | 62.25 | | |
| TOTAL | $2,907.23 | $1,440.55 | $1,466.68 |

We not only supply the machine, and accessories, but we have an oxygen service second to none. Gas and supplies can be handled within a few hours after receipt of order. Shipments can be made promptly from Atlanta, Chattanooga, Savannah or New Orleans.

We also have a corps of expert welders ready to come to your plant on a moment's notice to handle unusual breakdowns too big for your mechanics, or to teach your men how to use the apparatus.

## *A FEW OF THE MILLS USING B.W. APPARATUS*

Abbeville Cotton Mills, Abbeville, S. C.
Anchor Duck Mills, Rome, Ga.
Anderson Cotton Mills Anderson, S. C.
Arlington Cotton Mills, Gastonia, N. C.
Avondale Mills, Birmingham, Ala.
Baldwin Cotton Mills, Chester, S. C.
Barrow County Cotton Mills, Winder, Ga.
Bibb Mfg. Co., Macon, Ga.
Bordon Mfg. Co., Goldsboro, N. C.
Brandon Mills, Greenville, S. C.
Brookford Mills, Hickory, N. C.
Cowpens Mfg. Co. Cowpens, S. C.
Cannon & Co., York, S. C.
Canton Cotton Mills, Canton, Ga.
Carolina Cotton and Woolen Mills, Spray, N. C., (Seven mills.)
Cardinal Mills, West Point, Miss.
Carolina Bagging Co., Henderson, N. C.
Cherokee Falls Mfg. Co., Cherokee Falls, S. C.
Cherryville Mfg. Co., Cherryville, N. C.
Clayton Cotton Mills, Clayton, N. C.
Cleghorn Mills, Rutherfordton, N. C.
Cliffside Mills, Cliffside, N. C.
Clinton Cotton Mills, Clinton, S. C.
Clover Mfg. Co., Clover, S. C.
Cochran Cotton Mills, Cochran, Ga.
Cortney Mfg. Co., Newry S. C.
Covington Cotton Mills, Covington, Ga.
Crystal Springs Bleachery Co., Chickamauga, Ga.
Dacotah Cotton Mills, Lexington, N. C.
Deep River Mills, Randleman, N. C.
Dixie Cotton Mills, LaGrange, Ga.
Eagle and Phoenix Mills, Columbus, Ga.
Edna Cotton Mills, Reidsville, N. C.
Edwards Mills, Crawford Ga.
Ella Mfg. Co., Shelby, N. C.
Elmira Cotton Mills, Burlington, N. C.
Erlanger Cotton Mills, Lexington, N. C.
Erwin Cotton Mills, Durham, N. C.
Erwin Cotton Mills, Duke, N. C.
Fairfax Mills, Fairfax, Ala.
Florence Mills, Forest City, N. C.
Floyd Cotton Mills, Rome Ga.
Fort Mills Mfg. Co., Fort Mills, S. C.
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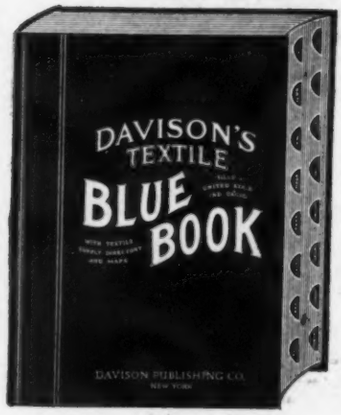


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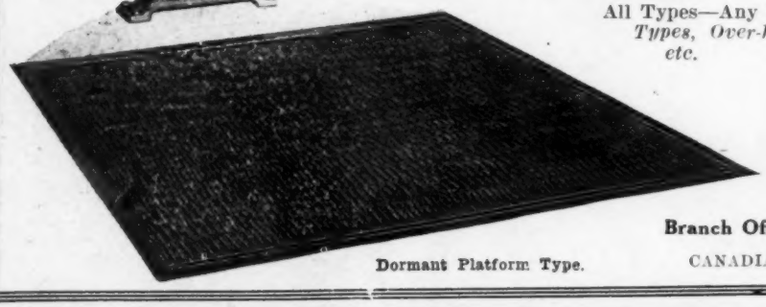

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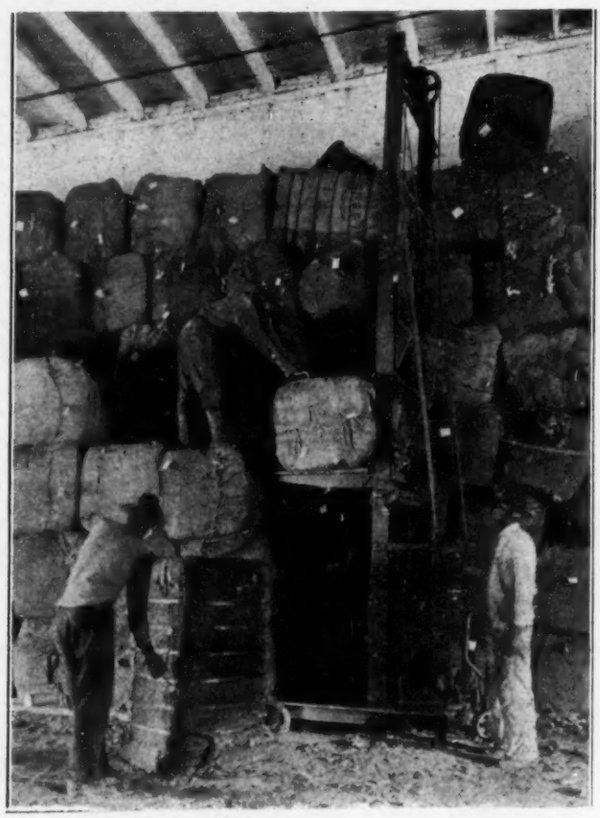

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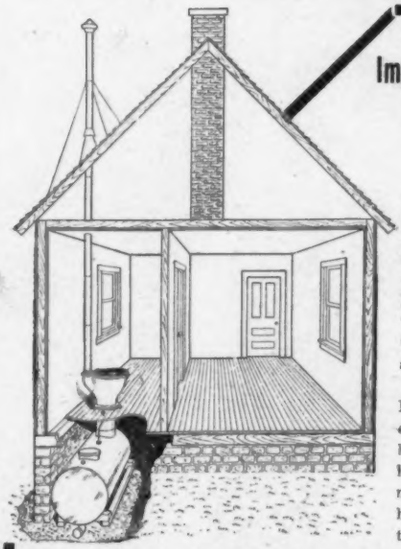

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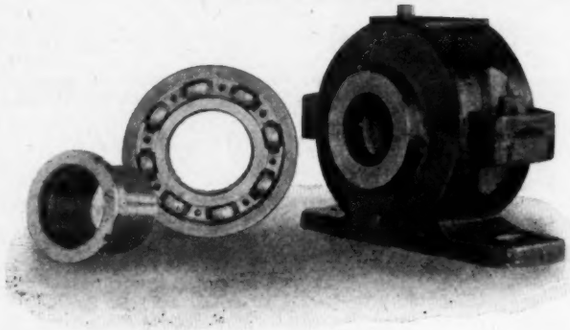

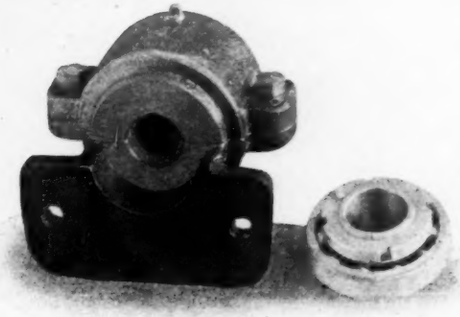

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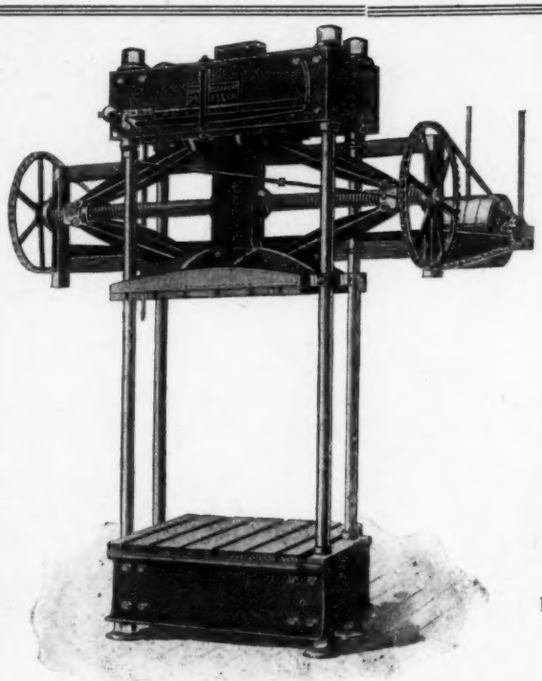

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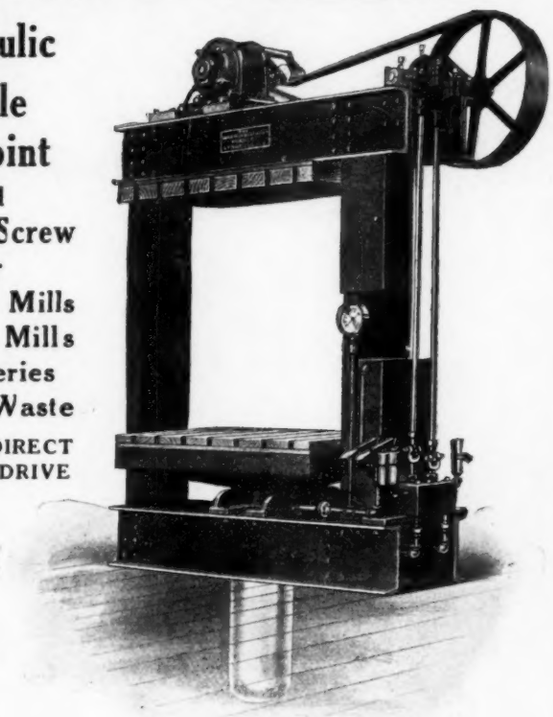

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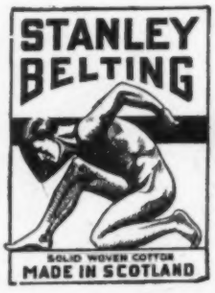


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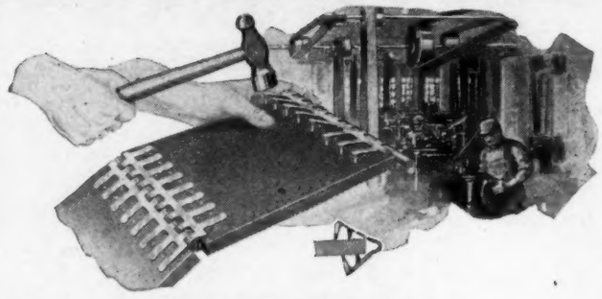

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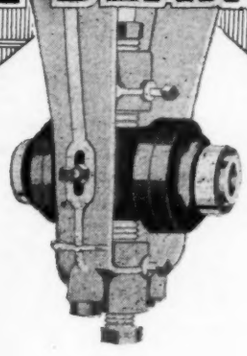

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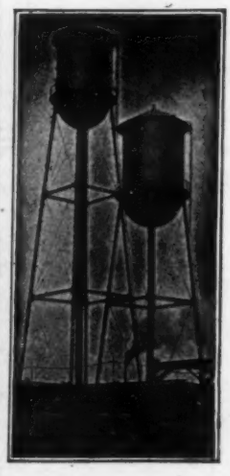

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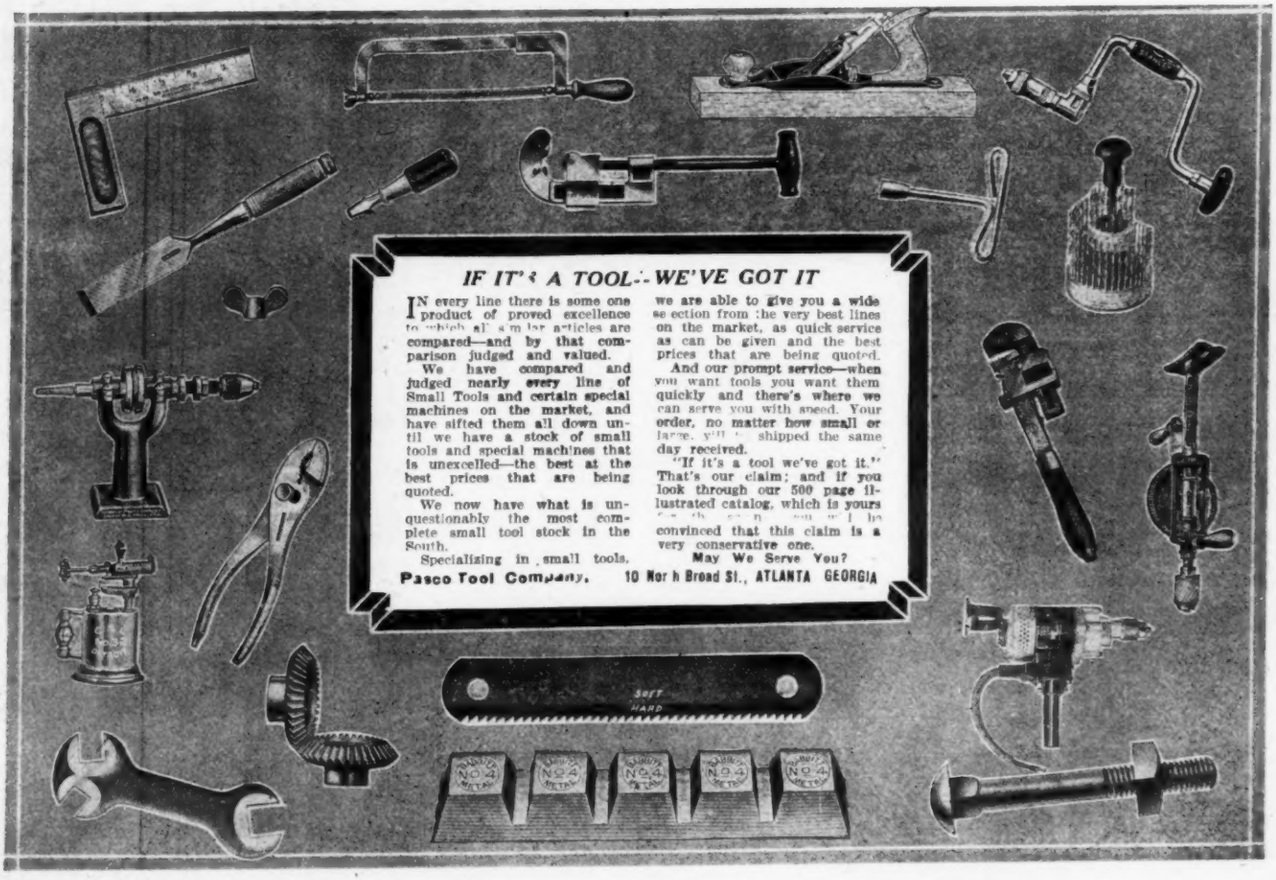
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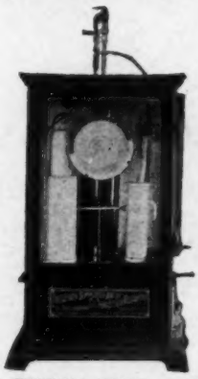

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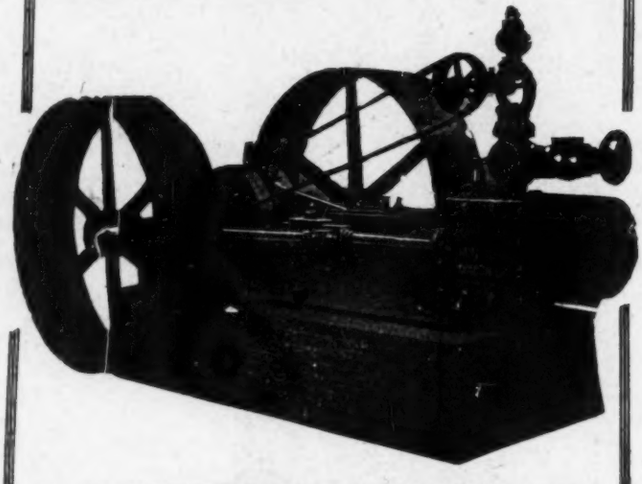

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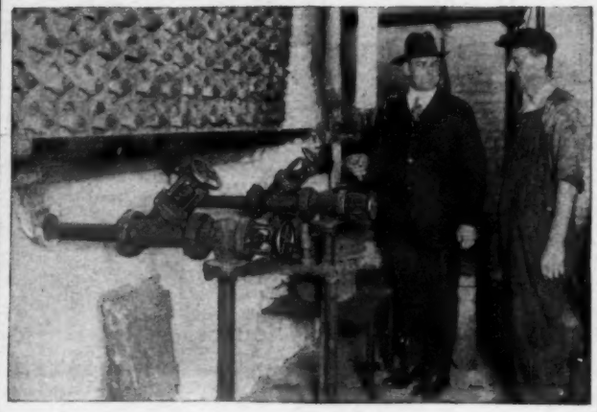

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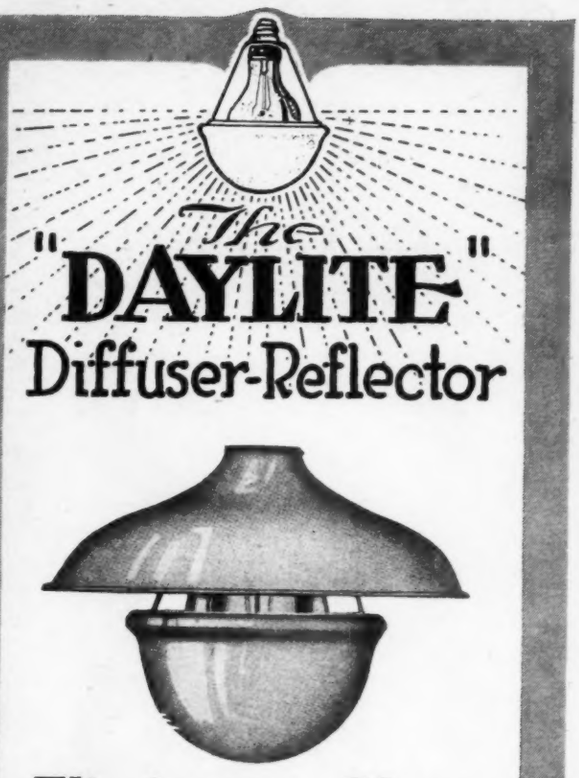

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## Eliminates Glare

Take the glare out of your lighting system.

Out in the mill there are men who are never free from glaring light. You pay for their headaches, layoffs, the material they waste and seconds they produce, and finally their damaged eyesight.

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They also light nearly 5,000 mill village houses

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# Standard Renewed Lamp Prices

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*National Lamp Works of General Electric Co.*

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Salesmen calling on the textile mills, and interested in new lines of machinery, paints, building supplies or chemicals, either as a side line or exclusively will find it profitable to write, giving experience, territory covered and other details. Correspondence strictly confidential. Cotton, 1021 Grant Building, Atlanta, Ga.

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**DRAUGHTING**
Drawings promptly made for Cotton Mill Buildings, Machinery, Plats, etc. Address Box 235, Atlanta, Ga.

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POSITION WANTED—Cotton Mill Manager or Superintendent, 20 years experience, wants position. Carded and combed yarns, prints and sheetings. Address Box 2, care COTTON, Atlanta, Ga.

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**PARKS & WOOLSON**
**SHEARING MACHINE**
**No. 66--66 1-2 Single Shear**
Address Box 12, care Cotton

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Corliss Automatic and Slide Valve

**BOILERS**

Pumps, Hoisting Engines, Gas and Gasoline Engines.

**MACHINE TOOLS**

Lathes, Planers, Shapers, Drill Presses, etc.

**WOOD WORKING**

Planers, Molders, Band Saws, etc.

**ELEC. MACHINERY**

Dynamos and Motors

**AND SUPPLIES OF ALL KINDS**

**FRANK TOOMEY, Inc.,**

127-31 N. Third St.

Philadelphia, - Pennsylvania

# HAVE YOU?

Have you any proposition to put before over 5,000 textile mill men? Anything to sell, or buy—desire to change your position—want a good man to fill a position?

Whatever your message, this "Classified Opportunities" page will be a valuable medium in placing your message before the men you want to reach. Try a small ad for a month or so.

# Buyers' Index

**Absorbent Cotton.**
Graves Co., Frank B.

**Accident Cabinets.**
Thomas Co., F. H.

**Acetylene Welding Apparatus.**
(See Welding Apparatus.)

**Acteylene Gas.**
Bird-Wilcox Co.
Commercial Acetylene Supply Co.

**Accountants.**
(See Auditors and Accountants.)

**Air Brakes.**
Allis-Chalmers Mfg. Co.

**Air Washers**
American Blower Co.
American Moistening Co.
Carrier Eng. Corp.
New York Blower Co.
Parks-Cramer Co.
Sturtevant Co., B. F.

**Air Conditioning Systems.**
(See Humidifying Apparatus.)

**Albone.**
Roessler & Hasslacher Chemical Co.

**Alkalies.**
(See Dyestuffs and Chemicals.)

**Aniline Colors.**
(See Dyestuffs and Chemicals.)

**Anti-Chlorine.**
(See Dyestuffs and Chemicals.)

**Aprons-Rub.**
Ladew & Co., Inc., Edw. R.
Smith & Furbush Machine Co.
Graton & Knight Mfg. Co.

**Architects and Engineers.**
Aberthaw Construction Co.
Belmont Iron Works.
Draper, E. S.
Hoffman & Co., Leon.
Huntington & Guerry, Inc.
Imperial Electric Co.
Lockwood, Greene & Co.
Monks & Johnson
Sirrine, J. E.
Slattery & Henry Co.

**Ash Handling Machinery.**
Hunt Co., C. W.
Link-Belt Company.

**Asphalt Slate Shingles.**
(See Slate Asphalt Roofing.)

**Auditors and Accountants.**
American Audit Co.
Atlantic Audit So., Inc.

**Automobiles.**
Hanson Motor Co.

**Auto Trucks.**
(See Trucks—Auto.)

**Automatic Loom Attachments.**
(See Loom Attachments.)

**Automatic Scales.**
American Kron Scale Co.

**Ball Bearings.**
Aldrich Mch. Works.
Hyatt Roller Bearing Co.
New Departure Mfg. Co
Transmission Ball Bearing Co., Inc.
U. S. Ball Bearing Co.

**Ball Bearing Spindles.**
(See Spindles—Ball Bearing.)

**Ball Bearing Housings.**
Aldrich Mch. Works.

**Bale Band Buckles.**
(See Box Strapping & Buckles.)

**Bale Ties.**
Acme Steel Goods Co.
Lovingood Co.
Signode System, Inc.

**Baling Machines.**
Crompton & Knowles Loom ks.
Draper Corporation.
Economy Baler Co.
Saco-Lowell Shops.
Seeger Machine Tool Co.

**Baling Presses.**
Butterworth & Sons Co., H. W.
Dunning & Boschert Press Co., Inc.
Economy Baler Co.
Lovingood Co.
Philadelphia Drying Mchry. Co.
Seeger Machine Tool Co.
Smith & Furbush Mfg. Co.

**Bandages, Tapes, Etc.**
American Textile Banding Co.
Seydel Mfg. Co.

**Bandage & Tape Machines.**
Cameron Mch. Co.
Seydel Mfg. Co.

**Banding Straps and Buckles.**
Acme Steel Goods Co.
Lovingood Co.
Signode System, Inc.

**Banks.**
First National Bank of Boston.
National Bank of Commerce in New York.
National Shawmut Bank of Boston.
Textile Banking Co., Inc.

**Barometers.**
Taylor Instrument Co.

**Baskets—Mill.**
(See Boxes—Mill.)

**Batteries (Elec.)**
(See Storage Batteries).

**Beam Dyeing Machines.**
Cocker Mchry. & Foundry Co.

**Beam Heads (Steel).**
Mossberg Co., Frank

**Beaming and Wrapping Mchry.**
(See Wrapers and Warping Machinery).

**Bearings.**
Hyatt Roller Bearing Co.
New Departure Mfg. Co
Transmission Ball Bearing Co.
U. S. Ball Bearing Co.

**Belting.**
American Supply Co.
Charlotte Leather Belting Co.
Goodyear Tire & Rubber Co.
Graton & Knight Mfg. Co.
Jewell Belting Co.
Kelley Co., Henry C.
Ladew & Co., Inc., Edw. R.
Stanley Belting Corp.
United States Rubber Co.
Williams & Co., I B.

**Belting—Chain Link.**
Link-Belt Company.
Morse Chain Co.

**Belting—Rope.**
(See Rope Transmission.)

**Belt Conveyors.**
Link-Belt Company.
Morse Chain Co.
Williams & Sons, I. B.

**Belt Dressing.**
Jos. Dixon Crucible Co.
Goodyear Tire & Rubber Co.
Graton & Knight Mfg. Co.
Ladew & Co., Inc., Edw. R.
Williams & Co., I. B.

**Belt Fasteners.**
Flexible Steel Lacing Co.

**Belt Lacing.**
Flexible Steel Lacing Co.

**Belt Lacing.**
Flexible Steel Lacing Co
Goodyear Tire & Rubber Co.
Graton & Knight Mfg. Co.
Ladew & Co., Inc., Edw. R.
Stanley Belting Corp.
Williams & Sons, I. B.

**Belt Tighteners.**
Link-Belt Company.
Williams & Sons, I. B.

**Benches (Park & Playground).**
Dow Wire & Iron Works.
American Playground Device Co.
Hill-Standard Co.
Manufacturers Equip. & Eng. Co.

**Bleacheries.**
(See Dyers, Bleachers and Finishers.)

**Bleaching Kiers.**
Butterworth & Sons Co., H. W.
International Eng. Wks., Inc.
Philadelphia Drying Mchry. Co.
Textile Finishing Machinery Co., The

**Bleaching Machinery.**
(See Dyeing, Bleaching & Finishing Machinery.)

**Bleaching Materials.**
Arabol Mfg. Co.
Atlantic Dyestuff Co.
Barrett Co.
Bosson & Lane.
Dicks-David Co., Inc.
Born, Scrymser Co.
Du Pont de Nemours & Co., E. I.
Electro Bleaching Gas Co.
Electric Smelting & Alum. Co.
Grasselli Chemical Co.
Hemingway, Inc., Frank
Kali Mfg. Co.
Kilpstein & Co., A.
National Aniline & Chemical Co.
Newport Chemical Works, Inc.
Roessler & Hasslacher Chemical Co.
Seydel Mfg. Co.
Sonneborn Sons, Inc., L.
Surpass Chemical Co.
Wolf & Co., Jacques
Zavon, Inc.

**Blowers and Blower Systems.**
American Blower Co.
American Moistening Co.
Carrier Eng. Corp.
General Electric Co.
New York Blower Co.
Phila. Drying Machinery Co.
Sturtevant Co., B. F.
Westinghouse Elec. & Mfg. Co.

**Boards—Form.**
Paramount Hosiery Form Drying Co.
Pearson, Jos. T.

**Bobbins.**
Brown Co., The David
Draper Corporation.
Greenville Spool & Mfg. Co.
Jordan Mfg. Co.
Shambow Shuttle Co.
U. S. Bobbin & Shuttle Co.
Whitin Machine Works.

**Boilers.**
Carpenter Co., Geo. B
International Eng'g. Wks., Inc.
Lombard Iron Works & Supply Co
Schofield's Co., J. S.
Toomey, Frank.
Walsh & Weidner Boiler Co.

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Excello Mfg. Co.

**Boiler Feed Water Purification.**
Permutit Co.
Refinite Co.
Scaife & Sons, Wm. B.

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Jenkins Bros.
Lunkenheimer Co.
Precision Instrument Co.

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Jos. Dixon Crucible Co.

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Lovingood Co.
Signode System, Inc.

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Keystone Fibre Co.
Lane & Bro.
Leatheroid Sales Co.
Rogers Fibre Co.
Standard Fibre Co.

**Braids.**
(See Tapes.)

**Brokers (Cotton).**
Beer, H. & B.
Rose Co., Edward.

**Brushes—Mill.**
Felton Brush Co., D. D.
Felton, S. A. & Son Co.

**Brushes—Commutator.**
Dixon Crucible Co., Jos.
General Electric Co.
Westinghouse Elec. & Mfg. Co.

**Buckets & Pails—Mill.**
Keystone Fibre Co.
Leatheroid Sales Co.
Rogers Fibre Co.
Standard Fibre Co.

**Buckets—Elevator and Grab.**
Link-Belt Company.

**Buckles—Cotton Tie.**
(See Box Strapping and Ties).

**Building Contractors.**
(See Architects & Engineers.)

**Buildings—Portable.**
Alexander Lumber Co.
Aladdin Co.
Lockwood, Greene & Co.

**Building Material.**
Aberthaw Construction Co.
Aladdin Co.
Alexander Lumber Co.
Anchor Post Iron Works.
Belmont Iron Works.
Carpenter Co., Geo. B.
Barrett Co., The
Detroit Graphite Co.
Dufur & Co.
Kirkpatrick Lumber & Timber Co.
Lockwood, Greene & Co.
Peaslee-Gaulbert Co., Inc.
Tuxbury Lumber Co..A. C.

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Alexander Lumber Co.
Aladdin Co.
Tuxbury Lumber Co..A. C.

**Burr Pickers.**
Sargent's, C. G., Sons.
Smith & Furbush Machine Co.

**Bushings.**
Southern Spindle & Flyer Co.

**Calenders.**
Textile Finishing Mchy. Co.

**Calender Rolls.**
Roy & Son, B. S.

**Calling System (Inter Telephone).**
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Collins, J. D.

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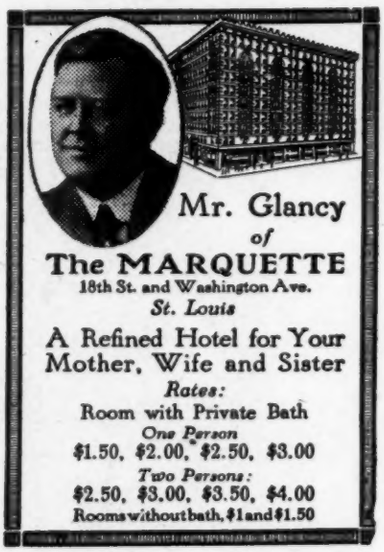


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IN THE HEART OF THINGS

# BUYERS' INDEX—Continued.

**Cars and Trucks—Fibre.**
(See Trucks.)

**Carbonizing Machines.**
Philadelphia Drying Mchry. Co.
Phila. Textile Mchy. Co.
Sargents Sons & Co., C. G.
Textile Finishing Machinery Co., The

**Carding Machinery.**
Howard & Bullough.
Saco-Lowell Shops.
Smith & Furbush Mach. Co.
Southern Spindle & Flyer Co.
Whitin Machine Works.

**Card Clothing.**
Howard & Bullough.
Saco-Lowell Shops.
Southern Spindle & Flyer Co.
Whitin Machine Works.

**Card Feeds.**
Schofield, Wm. Co.
Smith & Furbush Mach. Co.
Whitin Machine Co.

**Card Grinding Machinery.**
Roy & Son Co., B. S.
Smith & Furbush Mch. Co.
Whitin Machine Works.

**Carpet Machinery.**
Butterworth, H. W., & Sons Co.
Crompton & Knowles Loom Wks.
Phila. Textile Machy. Co.
Phila. Textile Machy. Co.
Schofield, Wm. Co.
Smith & Furbush Mch. Co.
Textile Finishing Mchy. Co., The

**Carrier Aprons.**
(See Aprons.)

**Castings.**
Dunning & Boschert Press, Co., Inc.
Lombard Foundry & Mch. Co.

**Caustic Soda.**
(See Bleaching Materials.)

**Cement Machinery.**
Allis-Chalmers Mfg. Co.

**Cement and Brick Coating.**
Detroit Graphite Co.
Dixon Crucible Co., Jos.
Excello Mfg. Co.
Peaslee-Gaulbert Co., Inc.
Wadsworth Howland & Co.

**Chain Drives.**
(See Belting—Chain Link.)

**Chain (Block, Bicycle, Auto Engine, Agricultural, Etc.)**
Morse Chain Co.

**Chairs and Stools (Steel).**
Manufacturers Equip. & Eng. Co.

**Checks—Metal.**
(See Stamps, Stencils, etc.)

**Chemicals.**
(See Dyestuffs and Chemicals.)

**Chlorine Gas.**
Electro Bleaching Gas Co.

**Clocks (Hank, Etc.)**
(See Counters.)

**Clocks (Time).**
International Time Recorder Co.

**Closets (Water).**
(See Toilets.)

**Cloth Balers.**
(See Baling Presses.)

**Cloth Cutters.**
Cameron Machine Co.
Firsching, J. A.
Wildman Mfg. Co.

**Cloth Room Machinery.**
Butterworth, H. W. & Sons Co.
Firsching, J. A.
Saco-Lowell Shops.
Scott & Co., Henry L.
Southern Novelty Co.
Textile Finishing Machinery Co.
Wildman Mfg. Co.

**Cloth Shrinking Machinery.**
Reliance Machine Works.

**Cloth Testers.**
Scott & Co., Henry L.

**Cloth Tubes.**
Southern Novelty Co.

**Cloth Winders.**
(See Winders)

**Clutches (Friction.)**
Cresson-Morris Co.
Dodge Sales & Eng. Co.
Link-Belt Company.
Transmission Ball Bearing Co.

**$CO_2$ Recorders.**
Precision Instrument Co.

**Coal Driers (Centrifugal).**
Link-Belt Company.

**Coal Handling Machinery.**
Hunt Co., C. W.
Link-Belt Company.

**Coal Tar Disinfectants.**
(See Disinfectants.)

**Cocks.**
Lunkenheimer Co.

**Cloors.**
(See Dyestuffs and Chemicals.)

**Color Pails.**
(See Buckets—Mills.)

**Comb Aprons.**
(See Aprons.)

**Commission Merchants and Dealers.**
(See Cotton Cloth Commission Merchants.)

**Compresses (Cotton).**
Bridge & Co., Ltd., David

**Compression (High Density).**
Bridge & Co., Ltd., David

**Compressors, Air.**
Allis-Chalmers Mfg. Co.
General Electric Co.
Seeger Machine Tool Co.

**Concrete Floor Hardener.**
Excello Mfg. Co.

**Condensers.**
Allis-Chalmers Mfg. Co.
Seeger Machine Tool Co.

**Cone Winders.**
Foster Machine Co.

**Connectors (Frankel Solderless).**
Westinghouse Elec. & Mfg. Co.

**Contractors (Building).**
(See Architects and Engineers.)

**Contractors (Heating & Plumbing).**
Belcher Heating & Plbg. Co.

**Contractors (Electrical).**
(See Electrical Engineers.)

**Controlling Instruments (Temperature).**
Tagliabue Mfg. Co., C. J.
Taylor Instrument Co.

**Conveying Machinery.**
American Pulley Co.
American Supply Co.
Carpenter Co., Geo. B.
Collins, J. D.
Cresson-Morris Co.
Hunt Co., C. W.
Link-Belt Co.
Morse Chain Co.
Phila. Drying Machinery Co.
Phila. Textile Machy. Co.
Saco-Lowell Shops.
Seeger Machine Tool Co.
Schofield, Wm. Co.
Smith & Furbush Machine Co.
Whitin Machine Works.

**Coolers.**
(See Humidifying Apparatus.)

**Coolers (Water).**
(See Water Coolers.)

**Cooling Towers.**
(See Tanks and Towers.)

**Copper Stamps and Stencils.**
(See Stamps, Stencils, Etc.)

**Cordage Machinery.**
Saco-Lowell Shops.
Smith & Furbush Mach. Co.
Textile Finishing Machinery Co. The.
Seeger Machine Tool Co.

**Cotton Cloth Commission Merchants and Dealers.**
Carver-Beaver Yarn Co., Inc.
Amoskeag Mfg. Co.
Barrell & Co., Wm. L.
Bliss, Fabyan & Co.
Fawcett, Hughes.
Hunter Mfg. & Commission Co.
International Cotton Products Co.
Lane & Co., J. H.
Lawrence & Co.
Pacific Mills
Southern Cotton Yarn Co.
Tolar & Hart.
Turner Co., J. Spencer.
Weimar Bros.
Wellington, Sears & Co.
Woodward Baldwin & Co.

**Cotton Dealers and Brokers.**
(See Brokers.)
Cocker Mch. & Foundry Co.

**Cotton Mill Machinery and Supplies.**
Barber-Colman Co.
Brown Co., David.
Butterworth & Sons, H. W.
Cameron Mch. Co.
Carpenter Co., Geo. B.
Cocker Mch. & Foundry Co.
Crompton & Knowles Loom Wks.
Delahunty Dyeing Machine Co.
Draper Corporation.
Firsching, J. A.
Fletcher Works.

Foster Mch. Co.
Greenville Spool & Mfg. Co.
Greenville Textile Supply Co.
Hopedale Mfg. Co.
Howard & Bullough.
Mill Supply Co. of Greenville.
Phila. Drying Mchy. Co.
Phila. Textile Machy. Co.
Sargent's Sons, Corp., C. G.
Saco-Lowell Shops.
Schaum & Uhlinger.
Schofield Co., Wm.
Smith & Furbush Mach. Co.
Southern Textile Mchry. Co.
Stafford Co.
Steel Heddle Mfg. Co.
Terrell Machine Co.
Textile Finishing Machinery Co.
Universal Winding Co.
Whitin Machine Works.
Whittinsville Spinning Ring Co.

**Cotton Tape Loom.**
Fletcher Works.
Schaum & Uhlinger.

**Cotton Yarn Mills.**
(See Yarn Manufacturers.)

**Coupling (Rope).**
Hunt Co., C. W.

**Counters (Revolution, Hank, Pick, Etc).**
Veeder Mfg. Co.

**Cranes (Locomotive).**
Link-Belt Company.

**Crayons.**
American Crayon Co.
Dixon Crucible Co., Jos.

**Crushing Machinery.**
Allis-Chalmers Mfg. Co.

**Cutters (Cloth).**

**Cutters (Thread)**
(See Thread Cutters.)

**Dial Scales.**
American Kron Scale Co.

**Dictaphones.**
Dictaphone Co.

**Dies (Steel).**
(See Stamps, Stencils, Etc.)

**Disinfectants.**
Barrett Co., The

**Display Rooms.**
Merchants & Mfg. Exchange.

**Dobby Chains.**
Crompton & Knowles Loom Wks.
Whitin Machine Works.

**Doffing Boxes (Mill).**
(See Boxes—Mill.)

**Door Mats (Steel).**
Acme Steel Goods Co.
Tagliabue Mfg. Co., C. J.

**Draft Gauges and Thermometers.**
Taylor Instrument Co.

**Drawing Frames.**
Howard & Bullough.
Saco-Lowell Shops.
Whitin Machine Works.

**Drills (Electric).**
(See Electric Machinery.)

**Drinking Fountains.**
(See Fountains—Drinking.)

**Drop Wires.**
Steel Heddle Mfg. Co.

**Drying Apparatus.**
New York Blower Co.

**Drying Forms (Hosiery).**
Paramount Hosiery Form Drying Co.
Pearson, Jos. T.

**Drying Machinery.**
American Laundry Mchry. Co.
Butterworth, H. W. & Sons Co.
Phila. Textile Mchry. Co.
Sargent's Sons Corp., C. G.
Textile Finishing Machinery Co., The

**Dust Collectors.**
(See Blowers and Blowing Systems.)

**Dusting Machinery.**
Schofield Co., Wm.
Smith & Furbush Mach. Co.

**Dyers, Bleachers and Finishers.**
American Processing Co.
Amoskeag Mfg. Co.

**Dyeing, Bleaching, Finishing and Printing Machinery.**
American Laundry Mchry. Co.
Butterworth & Sons Co., H. W.
Philadelphia Textile Mchy. Co.
Cocker Mch. & Foundry Co.
Electro Bleaching Gas Co.
Firsching, J. A.
Fletcher Works.
Permutit Co.
Phila. Drying Machinery Co.
Phila. Textile Machy. Co.
Refinite Co.
Reliance Machine Works.
Schaum & Uhlinger.
Textile Finishing Machinery Co., The
Tolhurst Machine Works.

**Dye Sticks.**
Phila. Drying Machinery Co.

**Dyestuffs and Chemicals.**
Arabol Mfg. Co.
Atlantic Dyestuff Co.
Barrett Co.
Borne, Scrymser Co.
Bosson & Lane.
Du Pont de Nemours & Co., E. I.
Electro Bleaching Gas Co.
Grasselli Chemical Co.
Hemingway Inc., Frank
Kali Mfg. Co.
Klipstein & Co., A.
Lewis, John D.
Metz & Co., H. A.
National Aniline & Chemical Co.
Newport Chemical Works, Inc.
Rossler & Hasslacher Chemical Co.
Seydel Mfg. Co.
Sherwin-Williams Co.
Sonneborn Sons, Inc., L.
Surpass Chemical Co.
Wolf & Co., Jacques
Zavon, Inc.

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Sherwood Mfg. Co.

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(See Motors and Generators.)

**Electric Fans.**
(See Fans—Electric.)

**Electric Lamps.**
(See Lamps.)

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Flexible Steel Lacing Co.

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Daum, A. F.
Economy Fuse & Mfg. Co.
Federal Sign System.
Imperial Electric Co.
Luminous Specialty Co.
General Electric Co.
Pierce Fuse, Corp.
Seeger Machine Tool Co.
Seeger-Walraven Co.
Southern Textile Mchry. Co.
Snow & Co., E. W.
Walsh & Weidner Boiler Co.
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**JERSEY CITY, N. J.**

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Makes the Strongest, Smoothest Warps; the Best Cloth and Least Seconds.

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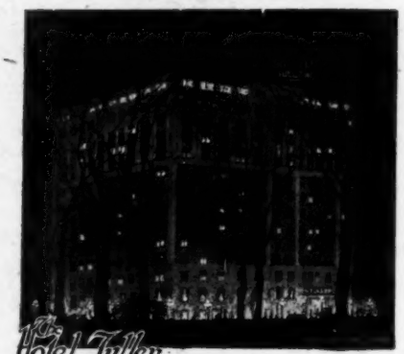


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600 ROOMS $2.00 UP
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MEN'S GRILL
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ROSE AND CASCADE ROOMS
COLORED WAITERS

We have recently reorganized our entire food service and are making an enviable record for modest charges and courteous and efficient service.

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IS BEST EXEMPLIFIED AT THE
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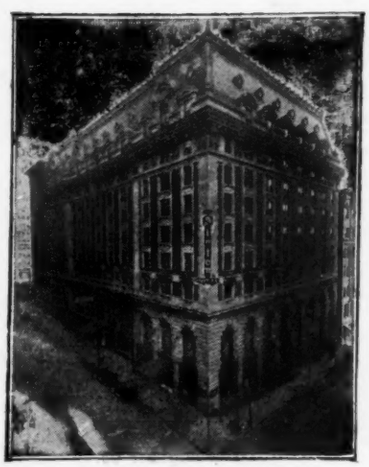

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# BUYERS' INDEX—Continued.

**Electric Tractors and Trucks.**
(See Tractors & Trucks—Elec.)

**Elevators.**
Collins, J. D.
Hunt Co., C. W.
Link-Belt Company.
Seeger Machine Tool Co.

**Enamel—Mill White.**
(See Paint—Mill White.)

**Engineers (Mill).**
(See Architects.)

**Engines—Oil, Gas and Gasoline.**
Carpenter Co., Geo. B.
Seeger Machine Tool Co.

**Engines—Steam.**
Allis-Chalmers Mfg. Co.
Carpenter Co., Geo. B.
Lombard Iron Works & Supply Co.
Schofield's Sons Co., J. S.
Toomey, Frank
Walsh & Weidner Boiler Co.

**Engine Appliances—Oil and Steam.**
Carpenter Co., Geo. B.
Jenkins Bros.
Lunkenheimer Co.
Michigan Lubricator Co.
Sherwood Mfg. Co.
Wright-Austin Co.

**Engine Room Supplies.**
Canton Grate Co.
Carpenter Co., Geo. B.
Dunning & Boschert Press Co., Inc.
Goodyear Tire & Rubber Co.
Jenkins Bros.
Lunkenheimer Co.
Graton & Knight Mfg. Co.
Michigan Lubricator Co.
Precision Instrument Co.
Sherwood Mfg. Co.
Wright-Austin Co.

**Extractors—Hydro.**
American Laundry Mchry. Co.
Fletcher Works.
Schaum & Uhlinger.
Tolhurst Machine Works.

**Fans—Electric.**
Allis-Chalmers Mfg. Co.
American Blower Co.
Carter Electric Co.
General Elec. Co.
Howard & Morse.
Westinghouse Elec. & Mfg. Co.

**Fans—Conveying, Power and Exhaust.**
(See Blowers and Blowing Systems.)

**Feed Water Purifiers.**
(See Water Softeners.)

**Felting Machinery.**
Smith & Furbush Mch. Co.

**Fence—Steel and Iron.**
Anchor Post Iron Works.
Belmont Iron Works.
Cyclone Fence Co.
Page Steel & Wire Co.

**Fibre Products.**
Keystone Fibre Co.
Lane & Bros., W. T.
Leatheroid Sales Co.
Rogers Fibre Co.
Standard Fibre Co.

**Filters—Water.**
(See Water Softening.)

**Finishing.**
(See Dyers, Bleachers and Finishers.)

**Finishing and Sizing Materials.**
Arabol Mfg. Co.
Borne, Schrymser Co.
Bosson & Lane.
Corn Products Refining Co.
Du Pont de Nemours & Co., E. I.
Electric Smelting & Alum. Co.
Grasselli Chemical Co.
Kali Mfg. Co.
Hemingway, Inc., Frank
Kilpstein & Co., A.
Newport Chemical Works, Inc.
Metz & Co., H. A.
National Aniline & Chemical Co.
Roessler & Hasslacher Co.
Co.
Seydel Mfg. Co.
Sherwin-Williams Co.
Sonneborn Sons, Inc., L.
Warren Soap Mfg. Co.
Wolf & Co., Jacques
Zavon, Inc.

**Fire Escapes (Spiral).**
Collins, J. D.

**Fire Hose.**
(See Paint—Fireproof.)

**Fire Protecting Paint.**
(See Hose—Fire.)

**First Aid Room Equipment.**
(See Hospital Equipment.)

**Flooring (Hardwood).**
Nashville Hardwood Flooring Co.

**Floor Scrubbing Machine.**
American Scrubbing Machine Co.

**Flue Cleaners.**
Diamond Power Specialty Co.

**Fluted Rolls.**
Howard & Bullough.
Saco-Lowell Shops.
Schofield's Sons Co., J. S.
Smith & Furbush Machine Co.
Southern Spindle & Flyer Co.
Whitin Machine Works.

**Flyers.**
Howard & Bullough.
Saco-Lowell Shops.
Southern Spindle & Flyer Co.
Whitin Machine Works.

**Fountains (Drinking).**
Manufacturers Equip. & Eng. Co.
Puro Sanitary Drinking Fountain Co.

**Friction Clutches.**
(See Clutches—Friction.)

**Fuses.**
(See Elec. Mchy. and Supplies.)

**Garnett Machines.**
Roy Son Co., B. S.
Smith & Furbush Mach. Co.

**Garnetted Stock.**
Graves Co., Frank B.

**Gas Engines.**
(See Engines—Gas.)

**Gassing Machines.**
Foster Mch. Co.

**Gaskets.**
Goodyear Tire & Rubber Co.
Graton & Knight Mfg. Co.

**Gauge Cocks.**
Lunkenheimer Co.

**Gauges—Draft.**
Precision Inst. Co.
Taylor Instrument Co.

**Gauges—Mercury Column Vacuum.**
Taylor Instrument Co.

**Gauges—Oil.**
Lunkenheimer Co.

**Gauges—Water.**
Lunkenheimer Co.

**Gears—Silent.**
General Electric Co.
Link-Belt Company.
Morse Chain Co.

**Gear Cutters.**
Cresson-Morris Co.
Whitin Mch. Co., D. E.

**Gear Pullers.**
Greb Co., Inc.

**Generators—Electric.**
(See Motors and Generators.)

**Generators—Electric.**
(See Motors and Generators.)

**Graphite—Products.**
Dixon Crucible Co., Jos.

**Grates (Boiler).**
Canton Grate Co.
Lombard Fdy. & Mch. Co.

**Grease.**
(See Lubricators.)

**Grease Cups.**
(See Lubricators.)

**Grinders—Card, Cylinder Roll, Napper and Garnett.**
(See Card Grinding Machinery.)

**Guards (Elec. Lamp.)**
Flexible Steel Lacing Co.

**Guards (Machine).**
Safety First Supply Co.

**Guides (Thread).**
Mitchell-Bissell Co.
Palmer Co., I. E.

**Gums.**
(See Finishing and Sizing Materials.)

**Hangers.**
(See Shafting and Hangers.)

**Hardwood.**
Nashville Hardwood Flooring Co.

**Harness—Loom.**
American Supply Co.
Crompton & Knowles Loom Wks.
Emmons Loom Harness Co.
Garland Mfg. Co.
Electro Bleaching Gas Co.

**Heaters (Water).**
Manufacturers Equip. & Eng. Co.

**Heating Contractors.**
Belcher Heating & Plbg. Co.

**Heating and Ventilating Apparatus.**
(See Ventilating Apparatus.)

**Heddles.**
Crompton & Knowles Loom Wks.
Draper Corporation.
Steel Heddle Mfg. Co.

**Heddle Frames.**
Crompton & Knowles Loom Wks.
Steel Heddle Mfg. Co.

**Hoists.**
Link-Belt Company.
Morse Chain Co.
Pasco Tool Co.
Seeger Machine Tool Co.

**Hose—Fire.**
Collins, J. D.
Goodyear Tire & Rubber Co.

**Hosiery Dyeing Machinery.**
Cocker Mch. & Fdry. Co.

**Hosiery Finishing Boards.**
(See Boards.)

**Hosiery Forms.**
(See Drying Forms.)

**Hosiery Yarns.**
(See Yarn Manufacturers.)

**Hospital Equipment.**
Safety First Supply Co.
Thomas Co., F. H.

**Hotels.**
Battery Park.
DeSoto.
Marquette.
Martinique.
Sinton.
Tuller.
Whittle Springs.

**Houses (Ready-Made).**
(See Bungalows.)

**Humidifying Apparatus.**
American Blower Co.
American Moistening Co.
Carrier Eng. Corp.
New York Blower Co.
Parks-Cramer Co.
Sturtevant Co., B. F.

**Hydraulic Turbines.**
(See Turbines—Steam.)

**Hydro Extractors.**
(See Extractors.)

**Hydrometers.**
Taylor Instrument Co.

**Hygrometers.**
Taylor Instrument Co.

**Hygrodeiks.**
Taylor Instrument Co.

**Indicating and Recording Instruments.**
Taylor Instrument Co.
Tagliabue Mfg. Co., C. J.

**Indigo.**
(See Dyestuffs and Chemicals.)

**Industrial Relationship.**
Sherman Service.

**Injectors.**
Lunkenheimer Co.
Sherwood Mfg. Co.

**Ink—Stencil and Marking.**
Atlanta Stamp & Stencil Wks.
Bradley Mfg. Co., A. J.
Lovingood Co.
National Marking Machine Co.

**Insurance (Group).**
Millers Indemnity Underwriters.

**Iron Work—Ornamental.**
Anchor Post Iron Works.
Belmont Iron Works.
Cyclone Fence Co.
Dow Wire & Iron Works.
Dufur & Co.
Lombard Iron Works & Supply Co.

**Jacks.**
Paulus, Chas. B.

**Jacquards.**
Crompton & Knowles Loom Wks.

**Jute Bagging Machines.**
Smith & Furbush Mach. Co.

**Kettles—Size.**
(See Size Kettles.)

**Kettles—Soda.**
International Eng. Wks., Inc.
Lombard Iron Works & Sup. Co.
Manufacturers Equip. & Eng. Co.

**Kiers.**
(See Bleaching Kiers.)

**Knit Goods.**
(See Cotton Cloth Commission Merchants and Dealers.)

**Knit Goods Washers.**
(See Washers—Cloth.)

**Knitting Machinery and Supplies.**
Adams Co., Geo. H.
Boss Knitting Mach. Works.
Brinton Co., H.
General Machine Works.
Hemphill Mfg. Co.
Nye & Tredick Co.
Scott & Williams.
Smith & Furbush Mach. Co.
Wildman Mfg. Co.

**Lamps—Incandescent and Arc.**
Boston Economy Lamp Div.
Carter Electric Co.
General Electric Co.
Westinghouse Lamp Co.

**Lamp Guards (Key Locking).**
Flexible Steel Lacing Co.

**Lamp Reflectors.**
Carter Elec. Co.
Ivanhoe-Regent Works.
Luminous Specialty Co.

**Landscape Architects.**
(See Village Architects.)

**Lappers.**
Saco-Lowell Shops.
Smith & Furbush Mach. Co.
Whitin Machine Works.

**Latch Needles.**
Paulus, Chas. B.

**Laundry Machinery.**
American Laundry Mchry. Co.
Fletcher Works.
Schaum & Uhlinger.
Tolhurst Machine Wks.

**Lavatories.**
Mott Southern Co.

**Leather Belting.**
(See Belting.)

**Leather Specialties.**
American Supply Co.
Graton & Knight Mfg. Co.
Ladew & Co., Inc., Edw. R.
Williams & Sons, I. B.

**Linen Yarns.**
(See Yarns—Linen.)

**Link Belting.**
(See Belting—Link.)

**Linters.**
(See Waste Dealers.)

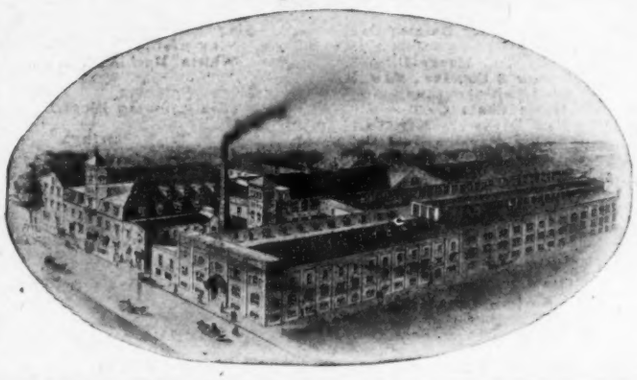
**Liquid Chlorine.**
(See Chlorine.)

**Loaders—Wagons and Trucks.**
Link-Belt Company.

**Lockers (Metal).**
Collins, J. D.
Manufacturers Equip. & Eng. Co.

**Logwood Extract.**
(See Dyestuffs and Chemicals.)

**Looms.**
Crompton & Knowles Loom Wks.
Draper Corporation.



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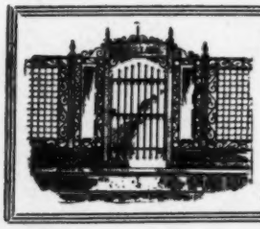

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Hopedale Mfg. Co.
Saco-Lowell Shops.
Schaum & Uhlinger.
Schofield, Wm. & Co.
Stafford Co., The
Whitin Machine Works.

**Loom Attachments (Auto).**
Draper Corp.
Hopedale Mfg. Co.

**Lumber (See Building Material).**

**Lubricants.**
Dixon, Jos., Crucible Co.
Kellogg & Co., E. H.
N. Y. & N. J. Lubricant Co.
Swan & Finch Co.

**Lubricators.**
Lunkenheimer Co.
Michigan Lubricator Co.
N. Y. & N. J. Lubricant Co.
Sherwood Mfg. Co.

**Lug Straps.**
(See Straps—Lug.)

**Machinery Guards (Wire).**
Safety First Supply Co.

**Marking Pots, Stencils, Inks, Etc.**
Atlanta Stamp & Stencil Wks.
Bradley Mfg. Co., A. J.
Lovingood Co.
National Marking Machine Co.

**Marking Machines.**
National Marking Machine Co.

**Mercerized Yarns.**
(See Yarns Mercerized.)

**Mercerizing Machinery.**
Butterworth, H. W. & Sons Co.
Textile Finishing Machinery Co.

**Metal Ceilings, Etc.**
Belmont Iron Works.
Lupton's Sons Co., David

**Metals (Perforated).**
(See Screens and Sieves.)

**Metal Workers—Sheet.**
Belmont Iron Works.
Lombard Iron Works & Supply Co.

**Meters—Flow Air, Gas, Electric, Steam, Etc.**
Allis-Chalmers Mfg. Co.
Carter Electric Co.
General Electric Co.
Tagliabue Mfg. Co., C. J.
Taylor Instrument Co.
Westinghouse Elec. & Mfg. Co.

**Meters (Revolution)**
Taylor Instrument Co.

**Mill Baskets and Boxes.**
(See Boxes—Mill.)

**Mill Engineer.**
(See Architects and Engineers.)

**Mill Villages.**
(See Villages.)

**Mill Supplies (Misc.).**
(See Supplies—Mill).

**Mill White Paint.**
(See Paint—Mill White.)

**Motors and Generators—Electric.**
Allis-Chalmers Mfg. Co.
Carter Electric Co.
General Electric Co.
Imperial Electric Co.
Seeger Machine Tool Co.
Westinghouse Elec. & Mfg. Co.

**Mule Stands.**
Transmission Ball Bearing Co.

**Nails—Cement Coated.**
Lovingood Co.

**Nappers.**
Roy & Son Co., B. S.

**Needles—Latch.**
Paulus, Chas. B.

**Oils—Finishing**
(See Finishing and Sizeing Materials.)

**Oils—Lubricating.**
(See Lubricants.)

**Oil Cups.**
(See Lubricators.)

**Oil Paper.**
Bradley Mfg. Co., A. J.

**Oiling Devices.**
(See Lubricators.)
Inc.

**Openers for Cotton, Wool, Waste Etc.**
Saco-Lowell Shops.
Schofield Co., Wm.
Smith & Furbush Mach. Co.
Whitin Machine Works.

**Oxidizing Machinery.**
Phila. Drying Machinery Co.

**Oxygen.**
Bird Wilcox Co.
Commercial Acetylene Supply Co.

**Packings.**
Goodyear Tire & Rubber Co.
Graton & Knight Mfg. Co.
Jenkins Bros.
United States Rubber Co.

**Paint.**
Atlanta Gas Light Co.
Barrett Co., The
Chaffee, Thos. K.
Detroit Graphite Co.
Du Pont de Nemours & Co., E. I.
Excello Mfg. Co.
Peaslee-Gaulbert Co., Inc.
Sherwin-Williams Co.
Vortex Mfg. Co.
Wadsworth, Howard & Co.

**Paint—Preservative and Fireproof.**
Atlanta Gas Light Co.
Barrett Co.
Detroit Graphite Co.
Du Pont de Nemours & Co., E. I.
Excello Mfg. Co.
Sherwin-Williams Co.
Peaslee-Gaulbert Co., Inc.
Vortex Mfg. Co.
Wadsworth, Howland & Co.

**Paint—Mill White.**
Chaffee, Thos. K.
Detroit Graphite Co.
Du Pont de Nemours & Co., E. I.
Excello Mfg. Co.
Peaslee-Gaulbert Co., Inc.
Sherwin-Williams Co.
Vortex Mfg. Co.
Wadsworth, Howland & Co.

**Paint Spraying Machines.**
De Vilbiss Mfg. Co.

**Paper.**
Blauvelt-Wiley Paper Mfg. Co.
Bradley Mfg. Co., A. J.

**Perforated Metal.**
(See Screens and Sieves.)

**Peroxides.**
Rossler & Hasslacher Chemical Co.

**Phonographs (Dictating).**
Dictaphone Co.

**Pickers—Curled Hair.**
Schofield, Wm. Co.
Smith & Furbush Mach. Co.

**Pickers—Leather.**
Garland Mfg. Co.

**Picker Sticks.**
Garland Mfg. Co

**Picking Machinery.**
Howard & Bullough, Am. Machine Co.
Saco-Lowell Shops.
Schofield Co., Wm.
Smith & Furbush Mach. Co.
Whitin Machine Works.

**Pipe Fittings.**
Lunkenheimer Co.

**Pipe Threading & Cutting Machines.**
Seeger Machine Tool Co.

**Playground Equipment.**
American Playground Device Co.
Dow Wire & Iron Works.
Hill-Standard Co.

**Plumbing & Heating.**
Belcher Heating & Plg. Co.

**Power Transmission.**
Aldrich Mch. Wks.
Allis-Chalmers Mfg. Co.
American Pulley Co.
Carpenter Co., Geo. B.
Charlotte Leather Belting Co.
Cresson-Morris Co.
Dodge Sales & Eng. Co.
General Electric Co.
Goodyear Tire & Rubber Co.
Graton & Knight Mfg. Co.
Hyatt Roller Bearing Co.
Jewell Belting Co.
Kelly Co., Henry C.
Ladew & Co., Inc., Edw. R.
Link-Belt Company.
Morse Chain Co.
New Departure Mfg. Co.
Seeger Machine Tool Co.
Stanley Belting Corp.
Seeger-Walraven Co.
Transmission Ball Bearing Co.
U. S. Ball Bearing Co.
U. S. Rubber Co.
Westinghouse Elec. & Mfg. Co.
Williams & Sons, I. B.

**Presses.**
American Laundry Machnry. Co.
Bridge & Co., Ltd., David
Butterworth & Sons Co., H. W.
Dunning & Boschert Press Co.
Economy Baler Co.
Lovingood Co.
Phila. Drying Machine Co.
Reliance Machine Works.
Seeger Machine Tool Co.
Smith & Furbush Mch. Co.
Textile Finishing Machinery Co., The

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Dodge Sales & Eng. Co.
Link-Belt Company.
Seeger Machine Tool Co.
Transmission Ball Bearing Co.

**Pulley Covering.**
Goodyear Tire & Rubber Co.
Stanley Belting Corp.
Williams & Sons, I. B.

**Pumps.**
Allis-Chalmers Mfg. Co.
Dunning & Boschert Press Co., Inc.
Seeger Machine Tool Co.
Textile Finishing Machinery Co.
Walsh & Weidner Boiler Co., The
Toomey, Frank
Westinghouse Elec. & Mfg. Co.

**Pump Valves.**
(See Valve Discs.)

**Psychrometers (Sling).**
Taylor Instrument Co.

**Pyrometers.**
Tagliabue Mfg. Co., C. J.
Taylor Instrument Co.

**Quills.**
U. S. Bobbin & Shuttle Co.

**Quill Cleaning Machines.**
Terrell Mch. Co.

**Railings.**
Dufur & Co.

**Recording Instruments.**
Tagliabue Mfg. Co., C. J.
Taylor Instrument Co.

**Reeds.**
American Supply Co.
Emmons Loom Harness Co.

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Draper Corporation.
Saco-Lowell Shops.
Schofield, Wm. Co.
Whitin Machine Works.

**Reflectors (Lamp).**
Ivanhoe-Regent Works.
Luminous Specialty Co.

**Regulators—Pressure.**
Tagliabue Mfg. Co., C. J.
Taylor Instrument Co.

**Regulators—Temperature.**
(See Temperature Controllers.)

**Repairing—Textile of all kinds.**
General Machine Works.
Southern Spindle & Flyer Co.

**Rewinding Machine.**
Cameron Mch. Co.

**Rib Top Cutters.**
General Machine Works.
Wildman Mfg. Co.

**Ring Travelers—Steel and Bronze.**
Whitinsville Spining Ring Co.
Whitin Machine Works.

**Rings—Spinning.**
(See Spinning Rings.)

**Rocker Shaft Bearings.**
(See Bearings.)

**Rolls (Calender.)**
Roy & Son Co., B. S.

**Rolls (Comber).**
U. S. Bobbin & Shuttle Co.

**Rolls—Steel.**
Southern Spindle & Flyer Co.

**Roofing.**
Asphalt Roofing Co.
Atlanta Gas Light Co.
Barrett Co., The
Belmont Iron Works.
Cortright Metal Roofing Co.
Detroit Graphite Co.
Peaslee-Gaulbert Co., Inc.
Vortex Mfg. Co.
Wadsworth, Howland & Co.

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Atlanta Gas Light Co.

**Roof and Cement Coating.**
Asphalt Roofing Co.
Atlanta Gas Light Co.
Barrett Co.
Detroit Graphite Co.
Du Pont de Nemours & Co., E. I.
Excello Mfg. Co.
Peaslee-Gaulbert Co., Inc.
Sherwin-Williams Co.
Vortex Mfg. Co.
Wadsworth, Howland & Co.

**Rope—Transmission.**
Cresson-Morris Co.
Dodge Sales & Eng. Co.
Hunt Co., C. W., Inc.
Kelly Co., Henry C.
Link-Belt Company.

**Roving Cans and Trucks.**
(See Cans—Roving.)

**Roving Machinery.**
Howard & Bullough.
Saco-Lowell Shops.
Whitin Machine Works.

**Rubber Stamps.**
(See Stamps, Stencils, Etc.)

**Rubber Goods.**
Goodyear Tire & Rubber Co.
United States Rubber Co.

**Sanitary Products.**
Kaustine Co.
Mott-Southern Co.
Rundle-Spence Mfg. Co.
Sanitary Eng. Co.
Vogel Co., Jos. A.

**Sash-Window—Steel.**
Lupton's Sons Co., David

**Scales.**
American Kron Scale Co.
Lovingood Co.
Standard Scale & Supply Co.
Toledo Scale Co.

**Scale Preventer (Boiler).**
(See Boiler Feed Water Purification.)

**Schools.**
Ga. School of Tech.

**Screens & Sieves—Perforated.**
Beckley Perforating Co.
Erdle Perforating Co.
Link-Belt Company.

**Scrubbing Machine—Floor.**
American Scrubbing Mch. Co.

**Sewing Machines.**
Merrow Machine Co., The
Textile Finishing Mchy. Co.
Wilcox & Gibbs Sewing Mach. Co.

**Shades (Electric Lamp).**
(See Reflectors).

**Shafting & Hangers.**
Cresson-Morris Co.
Dodge Sales & Eng. Co.
Link-Belt Co.
Seeger Machine Tool Co.
Seeger-Walraven Co.
Transmission Ball Bearing Co.

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**United States Railroad Administration**
**Director General of Railroads**

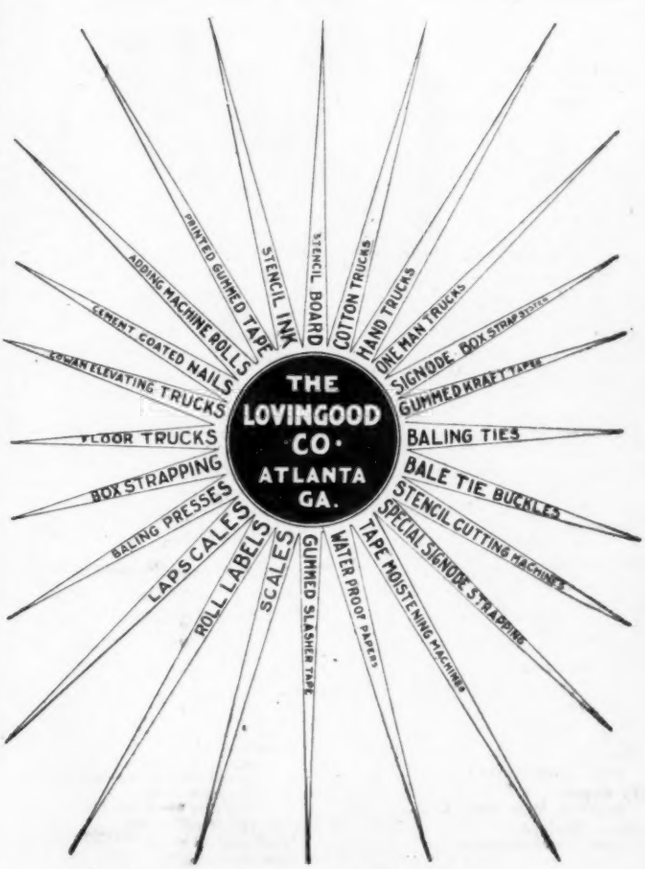
## GEORGIA RAILROAD

JOINT CIRCULAR NO. 130
Atlanta, Ga.,
Sept. 3, 1919.

**NOTICE**

In order to avoid any misunderstanding and confusion which might possibly prevail as a result of the act recently passed by the Georgia Legislature, changing the standard of time within the state of Georgia, this is to announce that such act does not affect the operation of trains. These lines will continue to operate trains under the U. S. Standard Time, as heretofore.

**W. W. CROXTON,**
**General Passenger Agent.**

# BUYERS' INDEX—Continued.

**Shears.**
Roy & Son Co., B. S.

**Shelving—Sectional Steel.**
Collins, J. D.
Lupton's Sons Co., David
Manufacturers' Equipment & Eng. Co.

**Shingles—Asphalt.**
Barrett Co.

**Shingles—Metal.**
Cortright Metal Roofing Co.

**Shower Baths.**
Mott-Southern Co.

**Shuttles.**
Brown Co., David
Crompton & Knowles Loom Wks.
Draper Corporation.
Shambow Shuttle Co.
U. S Bobbin & Shuttle Co.

**Signs (Electric).**
Federal Sign System.

**Signs (Porcelain, Bulletin Boards, etc.).**
Safety First Supply Co.

**Sinkers.**
Paulus, Chas. B.

**Singeing Machinery.**
Butterworth & Sons Co., H. W.
Phila. Drying Machine Co.
Textile Finishing Machinery Co., The

**Size Box Temperature Controller.**
Tagliabue Mfg. Co., C. J.

**Size Kettles.**
Butterworth, H. W. & Sons Co.
Howard & Bullough, American Machine Co.
Lombard Iron Works & Sup. Co.
Manufacturers' Equip. & Eng. Co.
Saco-Lowell Shops.
Textile Finishing Machinery Co., The

**Sizing and Finishing Compounds.**
(See Finishing & Sizing Materials.)

**Skewers.**
Brown Co., David
Greeneville Spool & Mfg. Co.
Jordan Mfg. Co.

**Skylights—Steel.**
Belmont Iron Works.
Lupton's Sons, Co., David

**Slashers and Slasher Room Supplies.**
Butterworth & Sons Co., H. W.
Cocker Mch. & Foundry Co.
Howard & Bullough.
Lovingood Co.
Mossberg Co., Frank
Saco-Lowell Shops.
Textile Finishing Machinery Co., The

**Slasher Tape.**
(See Tape—Slasher.)

**Slate Asphalt Roofing.**
Barrett Co.

**Slitting Machine.**
Cameron Machine Co.

**Slubbers.**
Howard & Bullough.
Saco-Lowell Shops.
Whitin Machine Works.

**Soap—Textile.**
Du Pont de Nemours & Co., E. I.
Electric Smelting & Alum. Co.
Grasselli Chemical Co.
Kali Mfg. Co.
Hemingway & Co., Frank
Kilpstein & Co., A.
Newport Chemical Works.
Sonneborn Sons, Inc., L.
Warren Soap & Mfg. Co.
Wolf & Co., Jacques

**Softeners—Cotton.**
Arabol Mfg. Co.
Atlantic Dyestuff Co.
Borne, Schrymser Co.
Bosson & Lane.
Du Pont de Nemours & Co., E. I.
Grasselli Chemical Co.
Hemingway & Co., Frank
Kali Mfg. Co.
Klipstein & Co., A.
Newport Chemical Works.
Rossler & Hasslacher Chemical Co.
Seydel Mfg. Co.
Sonneborn Sons, Inc., L.
Wolf & Co., Jacques
Zavon, Inc.

**Softeners—Water.**
(See Water Softeners.)

**Solderless Connectors (Frankel.)**
Westinghouse Elec. & Mfg. Co.

**Solvents.**
(See Finishing.)

**Soot Blowers.**
Diamond Power Specialty Co.

**Spindles.**
Draper Corporation.
Saco-Lowell Shops.
Southern Spindle & Flyer Co.
Whitin Machine Works.

**Spindles—Ball Bearing.**
Draper Corporation.
Howard & Bullough.
New Departure Mfg. Co.
Saco-Lowell Shops.
Smith & Furbush Machine Co.
U. S. Ball Bearing Co.

**Spinners.**
Arlington Cotton Mills.
Arrow Mills, Inc.
Flint Mfg. Co.
Gray Mfg. Co.
Myrtle Mills, Inc.
Parkdale Mills, Inc.

**Spinning Frames.**
American Machine Co., H. & B.
Crompton & Knowles Loom Wks.
Draper Corporation.
Fletcher Works.
Howard & Bullough.
Saco-Lowell Shops.
Schaum & Uhlinger.
Whitin Machine Works.

**Spinning Rings.**
Draper Corporation.
Howard & Bullough.
Whitin Machine Works.
Whitinsville Spinning Ring Co.
Greenville Spool & Mfg. Co.
Southern Novelty Co.
Universal Winding Co.
Whitin Machine Wks.
Whitinsville Spinning Ring Co.

**Spinning Tape Specialists.**
American Textile Banding Co. Inc.
Barber Mfg. Co.

**Spinning Room Machinery and Supplies.**

**Spooling Machinery.**
Draper Corporation.
Greenville Spool & Mfg. Co.
Saco-Lowell Shops.
Smith & Furbush Machine Co.
Whitin Machine Works.

**Spools & Skewers.**
Brown Co., David
Greenville Spool & Mfg. Co.
U. S. Bobbin & Shuttle Co.

**Sprinkler Tanks.**
(See Tanks, Towers, Etc.)

**Sprockets.**
Link-Belt Company.
Morse Chain Co.

**Stamps, Stencils and Stencil Machines.**
Atlanta Stamp & Stencil Works.
Bradley Mfg. Co., A. J.
Lovingood Co.

**Stand Pipes.**
(See Tanks, Towers, Etc.)

**Starch & Gums.**
(See Finishing and Sizing Materials.)

**Steam Engines.**
(See Engines—Steam.)

**Steam Hose.**
(See Hose—Steam.)

**Steam Pumps.**
(See Pumps—Steam.)

**Steam Traps.**
(See Traps—Steam.)

**Steel Doors, Window, Partition, Etc.**
Belmont Iron Works.
Lupton's Sons Co., David

**Steel Lockers.**
(See Lockers.)

**Steel—Structural.**
Belmont Iron Works.
Lockwood, Greene & Co.

**Stencils & Stencil Papers.**
(See Stamps and Stencils.)

**Stencil Brushes.**
(See Marking Pots and Brushes.)

**Stencil Cutting Machines.**
Atlanta Stamp & Stencil Works.
Bradley Mfg. Co., A. J.
Lovingood Co.

**Stop Motion.**
Crompton & Knowles Loom Wks.
Draper Corporation.
Hopedale Mfg. Co.
Wildman Mfg. Co.

**Storage Batteries.**
Edison Storage Battery Co.

**Storage Racks**
(See Shelving)

**Strapping.**
(See Leather Specialties or Box Strapping.)

**Supplies (General Mill).**
Carpenter Co., Geo. B.
General Textile Supply Co.
Mill Supply Co. of Greenville.
Seeger-Walraven Co.
Seeger Machine Tool Co.
Southern Textile Mchry. Co.
Steel Heddle Mfg. Co.

**Tacohmeters.**
Tagliabue Mfg. Co.
Veeder Mfg. Co.

**Tallow.**
(See Finishing Materials.)

**Tanks, Towns and Tubs.**
International Eng. Wks., Inc.
Lombard Iron Works & Supply Co.
Manufacturers' Equip. & Eng. Co.
Permutit Co.
Phila. Drying Machinery Co.
Textile Finishing Machinery Co., The
Walsh & Weidner Boiler Co.

**Tapes and Braids.**
American Textile Banding Co., Inc.
Barber Mfg. Co.
Weimar Brothers.

**Tape Looms—Cotton.**
Fletcher Works.
Schaum & Uhlinger.

**Tape—Slasher.**
Lovingood Co.

**Tape Making Machines.**
(See Bandage and Tape Mach.)

**Telephones (Calling System.)**
Carter Elec. Co.
Collins, J. D.

**Temperature Controllers.**
Carrier Eng. Corp.
Parks-Cramer Co.
Tagliabue Mfg. Co., C. J.

**Temples.**
Draper Corporation.
Hopedale Mfg. Co.

**Tenring Machines.**
Collins, J. D.

**Tenters.**
Butterworth & Sons Co., The
Textile Finishing Mach. Co.

**Textile Machinery.**
(See Cotton Mill Machinery.)

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Tagliabue Mfg. Co., C. J.
Taylor Instrument Co.

**Thin Place Preventers.**
Draper Corporation.

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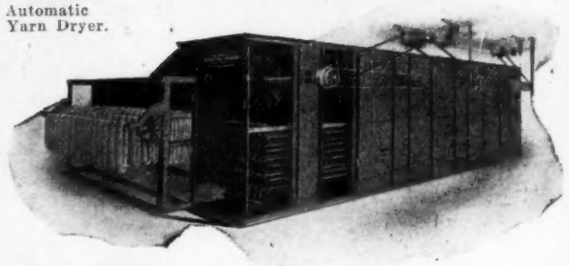

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Goodyear Tire & Rubber Co.

**Toilets.**
Dail Steel Products Co.
Kaustine Co., Inc.
Manufacturers Equip. & Eng. Co.
Mott-Southern Co.
Rundle-Spence Mfg. Co.
Vogel Co., Jos. A.

**Tools (All Kinds.)**
Pasco Tool Co.

**Towers.**
(See Tanks and Towers.)

**Tractors—Electric, Industrial.**
Automatic Transportation Co.
Baker R. & L. Co.
Collins, J. D.
Cowan Truck Co.
Elwell Parker Elec. Co.
Hunt Co., C. W.
Mercury Mfg. Co.

**Transmission—Power.**
(See Power Transmission Machinery.)

**Transfer Points.**
Adams Co., Geo. H.

**Traps—Return Steam.**
American Blower Co.
Morehead Mfg. Co.
Wright-Austin Co.

**Travelers (Spinning & Twisting.)**
Dary, Ring Traveler Co.

**Trucks—Auto.**
Baker, R. & L. Co.
Triangle Motor Truck Co., Inc.
White Co., The

**Trucks—Electric—Inter**
Automatic Transportation Co.
Baker, R. & L. Co.
Collins, J D.
Cowan Truck Co.
Elwell-Parker Electric Co.
Holyoke Truck Co.
Industrial Truck Co.
Hunt Co., C. W.
Mercury Mfg. Co.

**Trucks—Elevating—Inter.**
Collins, J. D.
Cowan Truck Co.
Elwell-Parker Elec. Co.
Holyoke Truck Co.
Industrial Truck Co.
Hunt Co., C. W.
Lovingood Co.

**Trucks—Fibre—Inter, Etc.**
Keystone Fibre Co.
Lane & Bro., W. T.
Leatheroid Sales Co.
Rogers Fibre Co.
Standard Fibre Co.

**Tubes (Cloth).**
Southern Novelty Co.

**Turbines—Steam.**
Allis-Chalmers Mfg. Co.
Carpenter Co., Geo. B.
General Electric Co.
Seeger Machine Tool Co.
Westinghouse Elec. & Mfg. Co.

**Twisting Machinery.**
Draper Corporation.
Howard & Bullough.
Leigh & Butler.
Saco-Lowell Shops.
Smith & Furbush Mach. Co.
Whitin Machine Works.

**Urinals.**
Manufacturers Equip. & Mfg. Co.
Mott-Southern Co.
Rundle-Spence Mfg. Co.
Vogel Co., Jos. A.

**Unions—Bronze.**
Jenkins Bros.
Lunkenheimer Co.

**Valves—Angle, Globe and Cross.**
Dunning & Boschert Press Co., Inc
Jenkins Bros.
Lunkenheimer Co.

**Valves—Anti-Acid.**
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**Varnishes.**
Barrett Co.
Detroit Graphite Co.
Du Pont de Nemours & Co., E. I.
Peaslee Gaulbert Co., Inc.
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**Ventilating Apparatus.**
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Carrier Eng. Corp.
General Electric Co.
New York Blower Co.
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Sturtevant Co., B. F.
Tolhurst Mch. Co.

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Aladdin Co., The
Draper, E. S.
Hoffman, Leon.
Monks & Johnson.
Sirrine, J. E.
Slattery & Henry Co.
Tuxbury Lumber Co., A. C.

**Village Houses.**
Alexander Lumber Co.
Aladdin Co., The
Tuxbury Lumber Co., A. C.

**Warp Drawing Machines.**
American Warp Drawing Mch. Co.
Cocker Machine & Fdy. Co.
Crompton & Knowles Loom Wks.

**Warpers and Warping Machinery.**
Cocker Mch. & Fdry. Co.
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Howard & Bullough.
Mossberg Co., Frank
Saco Lowell Shops.
Smith & Furbush Mach. Co.

**Washers—Cloth.**
American Laundry Machinery Co.
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Cocker Mch. & Foundry Co.
Philadelphia Drying Mchry. Co.
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**Washers (Leather.)**
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Rose Co., Edward.
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Steele By-Products Co.
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(See Bailing Presses.)

**Waste Machinery—Cotton.**
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Leigh & Butler.
Saco Lowell Shops.
Sargent's Sons Co., C. G.
Schofield Co., Wm.
Smith & Furbush Mach. Co.
Whitin Machine Co.

**Water Coolers (Fountain).**
Manufacturers Equip. & Eng. Co.
Puro Sanitary Drinking Fountain Co.

**Water Columns.**
Lunkenheimer Co.

**Water Heaters.**
(See Toilets.)

**Water Softeners.**
Permutit Co.
Refinite Co.
Scaife & Sons Co., Wm. B.

**Water Towers.**
(See Tanks and Towers.)

**Waterproofing Machinery.**
Butterworth, H. W. & Sons Co.
Textile Finishing Machinery Co. The

**Weaving.**
(See Yarn Manufacturers.)

**Welding Apparatus—Electric Arc.**
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**Welding Apparatus and Supplies—Oxy-Acetylene.**
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(See Village Architects.)

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American Playground Device Co.
Dow Wire & Iron Works.
Hill-Standard Co.
Mott-Southern Co.
Safety First Supply Co.
Thomas Co., F. H.
Tuxbury Lumber Co., A. C.

**Wheels—Fibre.**
Keystone Fibre Co.
Leatheroid Sales Co.
Macrodi Fibre Co.
Rogers Fibre Co.
Standard Fibre Co.

**Wheel Puller.**
Greb Co., Inc.

**Whistles (Electric).**
Federal Sign System.

**Whistles—Steam.**
Lunkenheimer Co.

**Winders.**
Cameron Mch. Co.
Foster Mch. Co.
Firsching, J. A.
Howard & Bullough, American Machine Co.
Saco-Lowell Shops.
Smith & Furbush Mach. Co.
Stafford Co., The

**Winding.**
Cameron Mch. Co.
Foster Mch. Co.

**Windows—Steel.**
Belmont Iron Works.
Lupton's Sons Co., David

**Wires (Drop).**
(See Drop Wires.)

**Wiring—Electrical.**
(See Electrical Contractors.)

**Wood.**
(See Lumber.)

**Wood Preserver.**
Atlanta Gas Light Co.
Barrett Co.
Detroit Graphite Co.
Du Pont de Nemours & Co., E. I.
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**Wood Pulleys.**
(See Pulleys.)

**Woolen Machinery.**
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Draper Corporation.
Schofield Co., Wm.
Phila. Drying Machinery Co.
Phila. Textile Machinery Co.
Sargent's Sons Corp., C. G.
Smith & Furbush Mach. Co.
Stafford Co., The
Textile Finishing Machinery Co.
Whitin Machine Works.

**Yarn Manufacturers.**
American Processing Co.
Arlington Cotton Mills.
Arrow Mills, Inc.
Flint Mfg. Co.
Gray Mfg. Co.
Myrtle Mills, Inc.
Parkdale Mills, Inc.

**Yarn Dealers and Commission Merchants.**
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# Advertisers' Index


Aberthaw Construction Co. 72 & 33
Acme Print Co., Inc. .....860
Acme Steel Goods Co. ..... 50
Adams Co., Geo. H. .....860
Aladdin Co., The ..... .. 78
Aldrich Machine Works .....315
Alexander Lumber Co. ..... 77
Allis-Chalmers Mfg. Co. ....137
American Audit Co. ....300 & 337
American Blower Co. ..... 38
American Crayon Co. ..... ..144
American Kron Scale Co. ....313
American Laundry Mchry. Co..189
American Machine Co., H. & B ..... 17 & 809
American Moistening Co. .... 39
American Overseas Forwarding Co. .....265
American Playground Device Co. .....308
American Processing Co. ....289
American Scrubbing Equipment Co. ..... 66
American Supply Co. .....306
American Textile Banding Co., Inc. .....860
Amoskeag Mfg. Co. .....275
Anchor Post Iron Works .....824
Anderson, Clayton & Co. 224 & 252
Anderson, Clayton & Fleming .....224 & 252
Arabol Mfg. Co. .....337
Arlington Cotton Mills .....269
Arrow Mils, Inc. .....269
Asphalt Roofing Products Co... 80
Atlanta Audit Co., Inc. .....337
Atlantic Dyestuff Co. .....200
Atlanta Gas Light Co. .....314
Atlanta National Bank ... ...295
Atlanta Rubber Stamp & Stencil Works .....335
Atlanta Trust Co. .....296
Atlanta & West Point Railroad Co. .....331
Atlantic & Gulf Shipping Co...290
Automatic Transportation Co...124

Baker, R. & L. Co. .....335
Bank of Commerce & Trust Co. (Memphis) .....262
Barber-Colman Co. .....333 & 335
Barber Mfg. Co. ..... 48
Barnwell & Co. .....266
Barrett Co. .....805
Barrell & Co., William L.....274
Battery Park Hotel .....331
Beane Bros. ..... 214
Beckley Perforating Co. .....308
Beer, H. & B. .....225 & 278
Beers, Kenison & Co. .....240
Belcher Heating & Plumbing Co. .....316
Belmont Iron Works .....318
Bird-Wilcox Co... .....311
Blauvelt-Wiley Paper Mfg. Co. 60
Bliss, Fabyan & Co. .....272
Board of Commissioners, Port of New Orleans 203, 204, 205, 206, 207 & 208.
Borne, Scrymser Co. .....194
Bosson & Lane.. .....198
Boston Economy Lamp Div. . .324
Boyce & Co. .....261
Bradley Mfg. Co., A. J. .....862
Bridge & Co., Ltd., David..40 & 41
Brinton Co., H. .....858
Brown Co., David .....306
Butterworth & Sons Co., H. W. .....184 & 185

Cameron Machine Co. ..... 32
Canton Grate Co. .....129
Carpenter & Co., Geo. B. ....200
Carrier Eng. Corp. .....826
Carter Electric Co. .....323
Carver-Beaver Yarn Co. .....278
Chaffee Co., Thos. K.....803
Chapman, J. A. .....247
Charlotte Leather Belting Co. .....99 & 100
Clark & Co., Jno. F. .....216
Classified Opportunities .....325
Cocker Machine & Foundry Co 188
Collins, J. D... .....313
Commercial Acetylene Supply Co. ..... 330
Cooper & Griffin, Inc. .....280
Corn Products Refining Co. ....192
Cortright Metal Roofing Co. ..862
Cotton Concentration Co.....234
Cowan Truck Co. .....121
Cresson-Morris Co. .....316
Crompton & Knowles Loom Works .....30 & 31
Cyclone Fence Co. ..... 93

Dail Steel Products Co. .....314
Daum, A. F. .....142
Davis, Roger W. ... ...5, 6, 7 & 8
Davison Publishing Co. .....312
Delta & Pine Land Co. .....259
Detroit Graphite Co. ..... 82
DeVilbiss Mfg. Co. ..... 83
Diamond Power Specialty Co...130
Dictaphone Co. ..... 56
Dixon Crucible Co., Joseph ...144
Dodge Sales & Eng'g Co. ....115
Dodson & Williams .....230
Dorrance & Co. .....255
Dow Wire & Iron Works .....144
Draper Corporation .....3 & 4
Draper, E. S. .....337
Dufur & Co. .....331
Dunning & Boschert Press Co..315
Du Pont de Nemours & Co., E. I. .....199

Economy Baler Co. .....112
Economy Fuse & Mfg. Co. ...322
Edison Storage Battery Co....125
Electro Bleaching Gas Co. ...183
Electric Smelting & Aluminum Co. ..... .....862
Elwell-Parker Electric Co. ....120
Emmons Loom Harness Co. ...331
Erdle Perforating Co. .....331
Excello Mfg. Co. ..... 87

Fawcett, Hughes .....278
Federal Sign System .....139
Felton & Sons Co., S. A. ..... 58
Feitel Bag Co., Dan. W.....230
Felton Brush Co., D. D. ..... 58
Fenner & Beane Co. .....214
Firsching Co., J. A. .....862
First National Bank of Boston...298
First National Bank of Fort Worth .....243
First National Bank of Houston 254
Flexible Steel Lacing Co. ....317
Fletcher Works ..... 34
Flint Mfg. Co. ..... .....269
Fort Worth Cotton Co. .....248
Fort Worth National Bank ...241
Foster Machine Co. ..... 27
Fourth National Bank of Atlanta .....287

Garland Mfg. Co. .....144
Galveston Coal Co. .....240
General Electric Co. .....141
General Machine Works .....362
Georgia Railroad .....333
Georgia School of Tech. .....291
Goodyear Tire & Rubber Co. ..114
Goold & Co. .....267
Gosho Company, Inc. .....246
Grasselli Chemical Co. .....193
Graton & Knight Mfg. Co. .... .....106 & 107
Graves Co., Frank B. .....284
Gray Mfg. Co. .....269
Greb Co. .....337
Greenville Spool & Mfg. Co. ..304
Greenville Textile Supply Co... 61

Hamilton Cotton Co. .....242
Hanson Motor Co. .....119
Harriss, Irby & Vose .....235
Hemingway, Inc., Frank .....198
Hemphill Co. .....846
Hill-Standard Co. ..... 51
Hoffman, J. Leon .....337
Holyoke Truck Co. .....307
Hopedale Mfg. Co. ..... 29
Hotel DeSoto .....329
Hotel Marquette .....327
Hotel Martinique .....327
Hotel Sinton .....329
Hotel Tuller .....329
Houston Chamber of Commerce .....249, 250 & 251
Houston Cotton Exchange .... .....249, 250 & 251
Howard & Bullough American Machine Co. .....17 & 809
Hubbell, Slack & Co. .....253
Hunt & Co., Inc., C. W. .....122
Hunter Mfg. & Commission Co.285
Huntington & Guerry, Inc. ...322
Hyatt Roller Bearing Co. 815, 816, 817, 818, 819, 820, 821 & 822
Hyman & Co., Alex .....228

Imperial Electric Co. .....337
Industrial Truck Co. .....121
Inman & Howard .....279
International Cotton Products Co. .....289
International Eng'g. Works ..132
International Time Recorder Co. 54
Ivanhoe-Regent Works .....140

Japan Cotton Trading Co.....248
Jenkins Bros. .....321
Jewell Belting Co. .....108
Johnson & Co., T. A. .....256
Jordan Mfg. Co. .....144

Kali Mfg. Co. .....196
Kaustine Co. .....88 & 89
Kellogg Co., E. H. .....335
Kelly Co., Henry C. .....317
Keever Starch Co. .....194
Keystone Fibre Co. ..... 48
Kirkpatrick Lumber & Timber Co. .....301
Klipstein & Co., A. .....197
Kohl & Co., H. S. .....226
Kolb's Restaurant .....232

# ADVERTISERS INDEX—Continued.


Ladew Co., Inc., Edw. R. .....113
Lane & Bro., W. T. ..... 44
Lane & Co., J. H. .....286
Lane Cotton Mills .....225
Lawrence & Co. .....273 & 277
Leatheroid Sales Co. ..... 49
Levy & Sons, M. .....219
Levy, Aronson & White .....221
Lewis, John D. .....862
Leyland & Co., Fred'k. 229 & 238
Link-Belt Co. .....110 & 111
Lockwood, Greene & Co. .....
19, 20, 21, 22, 23, 24, 25 & 26
Lombard Iron Works .....335
Lovingood Co., The .....333
Lowry National Bank .....294
Lucas & Pegues .....282
Luminous Specialty Co. .....321
Lunkenheimer Co. .....320
Lupton Sons Co., David ..... 79
Lykes Bros., Inc. .....229 & 239

Manget Bros. Co. .....282
Manufacturing Equipment & Eng'g Co. .....142
Marcel, Baudoux & Co. .....301
McFadden & Bros., Geo. H. ....227
Memphis Chamber of Commerce 258
Menge Marine Hardware & Supply Co. .....231
Merchants & Manufacturers Exchange .....64 & 65
Mercury Mfg. Co. .....123
Merrow Machine Co. .....854
Metz & Co., H. A. .....333
Michigan Lubricator Co. .....128
Mill Supply Co. of Greenville..301
Millers Indemnity Underwriters .....118
Minoprio & Co. .....218
Mitchell-Bissell Co. ..... 2
Monks & Johnson ..... 71
Monroe Calculating Machine Co. 57
Morehead Mfg. Co. .....126 & 127
Morse Chain Co. .....102 & 103
Mossberg Co., Frank .....305
Mott-Southern Co. .....90 & 91
Myrtle Mills, Inc. .....269

Nathan & Fettis .....230
National Aniline & Chemical Co. .....342
National Bank of Commerce in New York .....290
National Marking Machine Co.842
National Shawmut Bank of Boston .....299
New Departure Mfg. Co. .....832
New Orleans Asso. of Commerce .....201 & 202
New Orleans Loan & Investment Co., Inc. .....223
New Orleans Railway & Light Co. .....232
Newburger Cotton Co., Inc. ..263
New York & N. J. Lub. Co. ... 97
New York Blower Co. .....303
Newport Chemical Works ....812
Norton, Lilly & Co. .....231
Nussbaum, H. .....239
Nye & Tredick Co. .....858

Owens & Co., Tom B. .....244

Pacific Mills .....273
Page & Co., F. L. .....264
Palmer Co., I. E. .....302
Paramount Hosiery Form Drying Co. .....858
Parksdale Mills, Inc. .....269
Parks-Cramer Co...13, 14, 15 & 16
Parr & Co., Wm. .....237
Pasco Tool Co. .....319
Paulus, Chas. B. .....860
Pearson & Sons Co., Jos T. ..862
Peaslee-Gaulbert Co., Inc. ... 86
Permutit Co. ..... 98
Phila. Textile Mchry. Co. ....186
Phila. Drying Mchry. Co. ....335
Piedmont Bonded Warehouse & Compress Co. .....281
Pierce Fuse Corp. .....138
Precision Instrument Co. ....320
Public Belt Railroad of New Orleans .....209, 210 & 211
Pugh-Lyons & Co. .....226
Puro Sanitary Drinking Fountain Co. .....306
Refinite Co., The ..... 96
Reliance Machine Works .....858
Roberts Carter & Co. .....268
Robinson-Humphrey Co. .....300
Roessler & Hasslacher Chemical Co. .....812
Rogers Fibre Co. ..... 49
Rose Co., Edward .....283
Rowe-Cromwell Co. .....282
Roy & Sons Co., B. S. ..... 18
Rundle-Spence Mfg. Co. .....308

Saco-Lowell Shops ....5, 6, 7 & 8
Safety First Supply Co. ..... 63
Sargent's Sons Corp., C. G. ..188
Scaife & Sons Co., Wm. B.....335
Schaum & Uhlinger ..... 34
Schofield & Sons Co., J. S. ...320
Schofield Co., Wm. .....335
Scott & Co., Henry L. .....305
Scott & Williams, Inc. .....841
Seaboard Transportation & Shipping Co. .....236
Seeger Machine Tool Co. ....318
Seeger-Walraven Co. .....94 & 95
Sevilla & Son, E. .....237
Seydel Mfg. Co. .....329
Sgitcovich & Co., S. .....239
Shambow Shuttle Co. .....142
Sherman Service, Inc. ...74 & 75
Sherwin-Williams Co. ....84 & 85
Sherwood Mfg. Co. .....133
Signode System, Inc. ..... 55
Silvan, Newburger & Co.....217
Sins & Co., Inc., M. C. .....215
Sirrine, J. E. .....67, 68 & 69
Slattery & Henry, Inc. ..... 70
Sloan Co., N. P. .....279
Smith & Furbush Mch. Co. ...304
Snow & Co., E. W. .....324
Sonneborn Sons, Inc., L. .....196
Southeastern Waste Co. .....290
Southern Cotton Yarn Co. ....269
Southern Novelty Co. .....307
Southern Spindle & Flyer Co...302
Southern Textile Mchry. Co...302
Sprunt & Son, Inc., Alexander..256
Stafford Co., The ...9, 10, 11 & 12
Standard Fibre Co. ....52 & 327
Standard Scale & Supply Co...101
Stanley Belting Corp. .....316
Steel Heddle Mfg. Co. .....304
Steele By-Products Co., Inc...291
Stone Forwarding Corp. .....233
Sturtevant Co., B. F.36, 37, 46 & 47
Surpass Chemical Co. .....196
Swan & Finch Co. .....828

Tagliabue Mfg. Co., C. J. .....832
Taylor Instrument Co. .....319
Terrell Machine Co. .....830
Texas Star Flour Mills .....238
Texas Transport & Terminal Co., Inc. . ..... . 222
Textile Banking Co., Inc. ....298
Textile Finishing Mchry. Co ..340
Third National Bank of Atlanta ..... 292 & 293
Thomas Co., F. H. ..... 62
Thompson & Co., W. B...212 & 213
Tidemann & Co., Inc., K. ....247
Tolar & Hart ..... 276
Toledo Scale Co. ..... 53
Tolhurst Machine Works .....187
Toomey, Frank, Inc. .....325
Transmission Ball Bearing Co..317
Triangle Motor Truck Co. ... 59
Trust Co. of Georgia .....297
Turner Co., J. Spencer .....278
Tuxbury Lumber Co., A. C. ... 76

Universal Winding Co. .....
Union & Planters Bank & Trust Co. .....260
Union National Bank of Houston .....255
U. S. Ball Bearing Co. .....109
U. S. Bobbin & Shuttle Co. ... 35
United States Rubber Co.....104

Valley Waste Mills ..... 1
Vandriessche, F. L. .....301
Veeder Mfg. Co. ..... 42
Vogel Co., Jos. A. .....314
Vortex Mfg. Co., The ..... 81

Wadsworth, Howland & Co. .. 92
Walsh & Weidner .....318
Want Ads .....325
Ward & Co., W. M. .....257
Warren Soap Mfg. Co. ..195 & 198
Warriner, Inc., M. & R. .....220
Warwick, Aiken & Co. .....260
Webb, Inc., C. S. .....280
Weil Bros. .....282
Weimar Bros. .....269
Weld & White .....227
Wellington, Sears & Co. .....
.....228, 270 & 271
West Point Utilization Co. ...288
Westinghouse Electric & Mfg. Co. .....134, 135 & 136
Westinghouse Lamp Co. .....341
White Company .....116 & 117
Whitinsville Spinning Ring Co. 45
Whitin Machine Works ..28 & 303
Whiton Machine Co., D. E. ...306
Whittle Springs Hotel .....856
Wildman Mfg. Co. .....852
Willcox & Gibbs Sewing Machine Co. .....844 & 845
Williams & Co., H. T. .....245
Williams & Sons, I. B. .....105
Witherspoon Sons, O. F. .....246
Wolf & Co., Jacques .....200
Woodward, Baldwin & Co.276 & 278
Wright-Austin Co. .....131

Zavon, Inc. .....190 & 191

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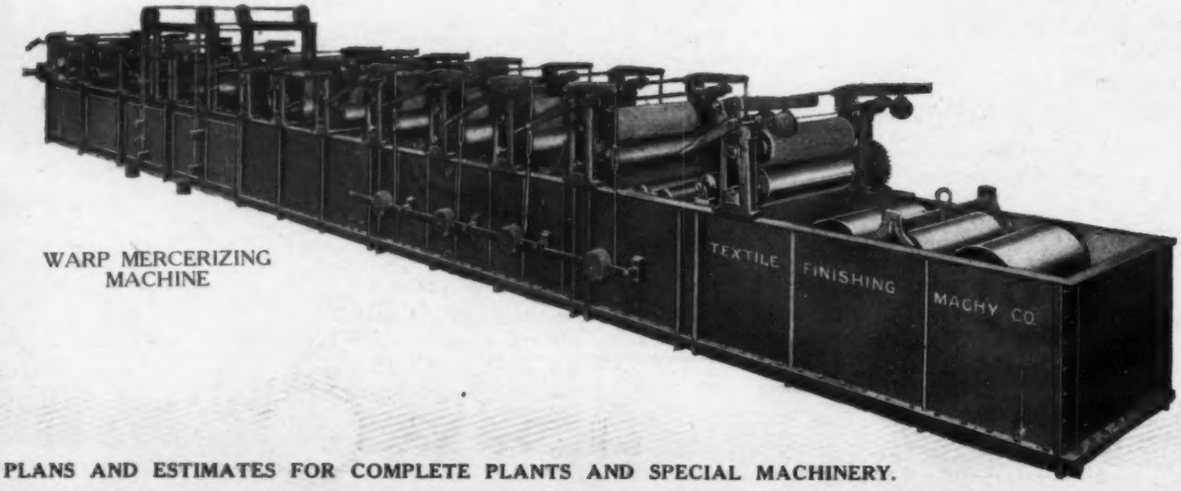


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